THE OIL WEEKLY

ENGINEERING « NEWS » STATISTICS

EDITORIAL STAFF
WARREN L. BAKER
Editor
J. KENT RIDLEY
Managing Editor

ASSOCIATE EDITORS
L. J. LOGAN — BRAD MILLS
WM. V. GROSS

DISTRICT EDITORS
B. F. LINZ.....Washington
GRADY TRIPLETT, FRANK TAYLOR, JACK CASBURN .....Tulsa
H. H. KING.....Fort Worth
W. E. GREEN.....Los Angeles
EARL S. POST.....San Antonio
R. W. BYRAM.....Austin
CHAS. LEYENDECKER.....Houston

PUBLISHED BY
THE GULF PUBLISHING COMPANY
HOUSTON, TEXAS

R. L. DUDLEY, *President*
A. L. BURNS, *General Manager*
S. W. ROBINSON, *Editorial Director*

Staff correspondents at all important points.

Member Audit Bureau of Circulation
Member Associated Business Papers, Inc.

BRANCH OFFICES
NEW YORK.....250 Park Ave.
PITTSBURGH....Standard Life Bldg.
CHICAGO.....332 S. Michigan Ave.
LOS ANGELES.....Haas Bldg.
TULSA.....Hunt Bldg.
FORT WORTH..W. T. Waggoner Bldg.
SAN ANTONIO.....112 Jefferson St.
WASHINGTON.....Albee Bldg.

ADVERTISING STAFF
DICK SWINSKY.....New York
A. W. BROWNELL, JR.....New York
C. A. WARDLEY.....Pittsburgh
T. W. NELSON.....Chicago
J. F. CARTER, JR.....Tulsa
W. E. GREEN.....Los Angeles
CHAS. WYATT.....Houston

CIRCULATION DEPARTMENT
I. T. WAGONER.....Manager

SPECIALIZED OIL JOURNALS
Published by
THE GULF PUBLISHING COMPANY

Oil Man's Calendar

Nov. 8-12	American Petroleum Institute, (Annual), Chicago, Illinois.
17-19	American Institute of Chemical Engineers, Annual Meeting, St. Louis, Missouri.
19	Mid-Continent Oil and Gas Association, Annual Membership Meeting, Kansas-Oklahoma Division, Tulsa, Oklahoma.
Dec. 2-3	Joint Annual Meeting, Standard Committees of General Mid-Continent Oil and Gas Association on Federal Income and Excise Taxation and on State and Local Taxation, Baker Hotel, Dallas, Texas.
6-10	American Society of Mechanical Engineers, New York.
14	Mid-Continent Oil and Gas Association, Annual Meeting of General Board of Directors, Tulsa, Okla.
14	East Texas Chapter, American Petroleum Institute, Kilgore, Texas.
1938 Jan. 24-25	Northwest Petroleum Association, Minot, North Dakota.
Mar. 16-18	Annual Meeting, American Association of Petroleum Geologists, Roosevelt Hotel, New Orleans, La.

Contents « November 8, 1937

Volume 87, Number 9

The Changing Panorama ..... 9 and 10

General News ..... 11 to 18

- Legislative Affairs 11
- Oil in the Courts 11
- Labor Situation 12
- Proration Matters 13
- Oil at Conventions 13
- Men in the Industry's News 62
- Squeaks from the Bull Wheel 136

Engineering and Technical ..... 19 to 60

- Squeeze Cementing Reduces Gas/Oil Ratios 19
  By BRAD MILLS
- Principles of Petroleum Engineering, Part 2 26
  By M. L. HAIDER
- Stripper Wells Gaining Second Wind Through Reconditioning .. 35
  By FRANK B. TAYLOR
- "Dressed-Up" Rig Pays on the Drilling Job 46
  By M. T. PATE
- How to Take Care of Electric Control Apparatus 52
  By E. H. LAMBERGER

Markets and Statistics ..... 65 to 72

- Outlook for Rest of Year Promising 70
  By L. J. LOGAN

World Developments ..... 74 to 76

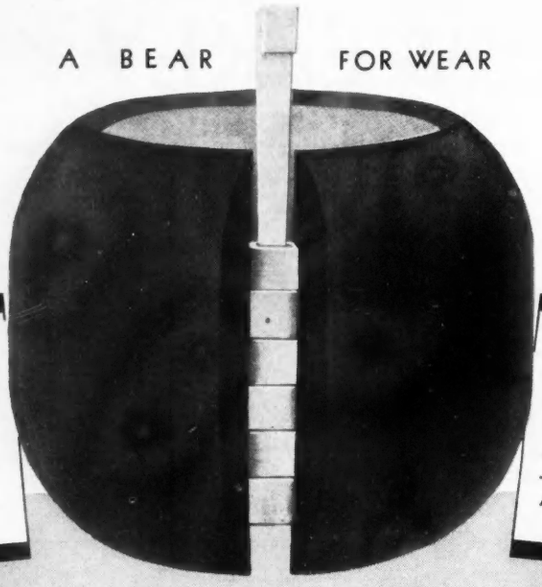
Index to Field Developments .....

New Products and Manufacturers News ..... 129 to 134

Published every Monday. Single Copies 15 cents (Special Issues 50c). Subscription price: domestic and foreign, $2.00 a year; 2 years $3.00. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879. Subscription restricted to those engaged in the producing and pipe line branches of the oil industry or the manufacturing and distribution of oil field supplies. Advertising rates on application.

Copyrighted 1937 by The Gulf Publishing Company.

A BEAR FOR WEAR



THE EASIEST PROTECTOR ON THE MARKET TO INSTALL OR TAKE OFF

REQUIRES NO SPECIAL INSTALLATION TOOLS OF ANY KIND ------ ONLY A HAMMER

GRIZZLY GIANT STREAMLINED DRILL PIPE PROTECTORS

An extra large, solid one-piece rubber body, shaped to fit exact contour of pipe and moulded under tremendous pressures, eliminating any expansion strain on rubber when installed.

The hinged back and tapered key locking device provide a tremendous grip that prevents protector from moving from position installed on pipe.

Can be installed by regular crew in few seconds by merely tapping key into locked position in tapered slots with a light hammer. As easily removed by tapping key out of slots. Protectors easily can be changed from one string to another.

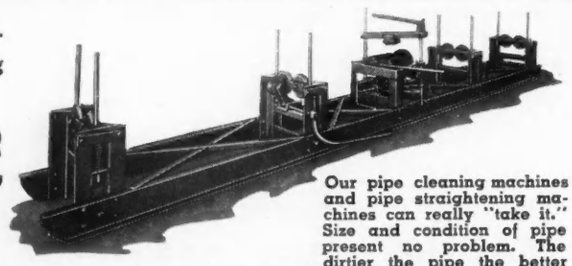
Made from the finest, toughest and yet the most resilient rubber possible to produce; especially compounded to resist wear and the action of oil and grease; the result of 25 years experience in the manufacture of highest quality rubber products.

Write for Bulletin No. 9-OF.

E. M. SMITH COMPANY
500-650 South Clarence Street, Los Angeles, California, U.S.A.
Complete Stocks Maintained in Our Warehouses at: 2311 West St., Houston, Texas; 1008 S. E. 29th St., Oklahoma City, Okla. Sold in the Mid-Continent and Gulf Coast by: Continental Supply Co., and T. T. Word Supply Co., Independent Pipe & Supply Co., Houston, Texas—In All Their Stores; Export Office: Continental Emsco Co., 30 Rockefeller Plaza, New York City.

New Deal Pipe Cleaning and Straightening Machines are

"GLUTTONS FOR PUNISHMENT"



Our pipe cleaning machines and pipe straightening machines can really "take it." Size and condition of pipe present no problem. The dirtier the pipe the better they clean. New Deal Pipe Cleaning Machines and Pipe Straightening Machines are making new records every day. Write for complete illustrated catalog.

The NEW DEAL SPECIALTY CO.
—INC.—
OKMULGEE, OKLA., U.S.A.

LOOKING AHEAD

WITH THE EDITOR

Economic and Technical Trends to be Studied at A. P. I. Meeting . . .

LARGEST get-together of oil men, the eighteenth annual meeting of the American Petroleum Institute goes into full swing in Chicago November 8 and winds up Friday night, November 12.

Papers presented in technical sessions will represent some of the best engineering thought available in the industry. Those given in other sessions will be on a similarly high plane.

To oil men attending, the Chicago meeting will be the most valuable of the year.

So—with eyes coyly averted and head slightly bowed in becoming modesty, we tell thee, dear Reader, that THE OIL WEEKLY will cover that meeting like the dew covers Dixie. Four full-time, full-fledged editorial men will spend the full week in Chi. This doesn't count leg men and cubs. What they muff in their copy will be restricted only to what Uncle Sam won't allow you to send through the mails.

Moreover,—and with our characteristic modesty continuing,—THE OIL WEEKLY of November 15 (that's the Monday right after the concatenation's conclusion on Friday) will be the FIRST oil publication to present FULL coverage on ALL the happenings and discussions — economic, technical and administrative.

Contributions of industrial research to industrial welfare will be featured in the general sessions. Six outstanding speakers will take the lead, three from the industry, three guest speakers from outside. THE OIL WEEKLY's staff men will highlight their talks for you.

Every paper,—and they are legion,—presented at the three group sessions of the Division of Production, devoted to drilling and production practices and problems, will be abstracted—and a number published in full—in the November 15 issue of THE OIL WEEKLY.

The changing panorama

this week

CONTRACTION of the demand for oil may accompany a recession in trade and industry, which the Department of Agriculture has predicted will extend well in 1938.

The first official admission that all is not well in the economic situation, the department's forecast is considered a bitter blow to other federal agencies, some of which have persisted in painting the business picture in rosy colors.

Special Problems In Oil Industry

The particular requirements of the oil industry, and of others that cannot be dealt with by a formula covering all industry in general, should be taken into consideration in the enactment of new anti-trust legislation.

This was the declaration of Attorney General Cummings last week, in urging that congress make an exhaustive study of the subject, before attempting to enact the legislation asked by President Roosevelt.

Averting Utility Status Urged

This from a man who knows, because he has been there:

"If I were to hazard a word of advice to the oid and gas industry it would be to warn you to so conduct your business as to escape being designated as a public utility."

The man who knows is Matthew S. Sloan, president of the Missouri-Kansas-Texas lines, who spoke before the annual meeting of the Texas Division of the Mid-Continent Oil & Gas Association in Dallas October 29. Sloan has spent most of his business career within industries that are under some sort of control by government.

By coincidence, his remarks were made from the same platform whence came the threat of designating the oil industry as a utility almost three years before. That threat came from Harold L. Ickes, Secretary of the Interior, who since has changed front as to oil. Earlier in the month, at Houston, Secretary Ickes paid state officials and the industry high compliment for their accomplishments in conservation.

Why the Utility Talk?

Expressions concerning a utility status for oil are not frequent enough to bring paralysis; still they raise a question—what has the industry done to justify even the infrequent expressions? Its record of delivering a necessary product at a declining retail price can not be matched by any industry under control of government. Few industries which are free of control have been as successful in serving the consumer.

What the industry should do is to search its conduct until it learns why the thought of control ever finds expression. Once found, the conduct should be changed, regardless of how valuable it may seem to the industry.

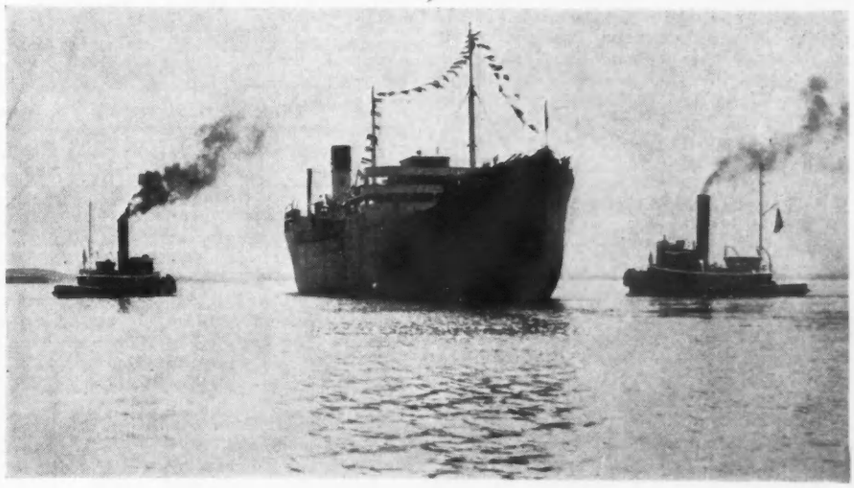
Hope Eternal In Ickes Breast

Despite the more tolerant attitude toward the petroleum industry that he expressed at Houston, Secretary of the Interior Ickes has not cast aside all the dreams he has dreamed of regulating the industry.

He never seriously advocated making the oil industry a full-fledged utility, like the railroads. But he did earnestly beseech congress to give him authority to regulate the industry, although in vain.

Now he apparently will try to achieve such control indirectly, under President Roosevelt's proposed reorganization of the Federal Establishment, which would transform the Interior Department into a Department of Conservation.

The secretary indicated this intention November 1, when he warned, in a coast-to-coast radio address, that the unbridled exploitation of oil and other natural resources must end; and that there must be



WHEN THE GULFWAVE, new tanker of Gulf Oil Corporation, slid down the ways at Sparrows Point, Md., it became the 39th tanker launched there. The overall length is 442 feet, the molded breadth 64 feet, and the designed draft 27 feet 6 inches. It will carry a cargo of about 3,500,000 gallons and will be used principally for the run between Gulf Coast ports and the Eastern seaboard. Keel for another tanker is being laid immediately on the ways used for the Gulfwave. In addition, five other tankers, in various stages of progress, are under construction at Sparrows Point.

adopted for the natural resources a national policy of conservation looking to the future.

Taxes on Imports Affected

Possibilities of a new attack on the excise taxes on imported oils were seen last week in the State Department's negotiation of a reciprocal trade agreement with Venezuela.

Authority in the trade agreements act to make concessions of up to 50 percent in import duties in the negotiation of such pacts has been construed by the department as extending to the import excise taxes. Oil imports constitute more than 70 percent of the United States total receipts from Venezuela, in value.

Phooey on Little Red School

Taxes have grown up and so has the little red schoolhouse. Especially in the newer oil fields, the school is no longer little, no longer red and no longer flanked by a smaller unpainted building. The oil field school is a massive plant, equipped with piping and utensils.

All these were dragged across the gridiron at the meeting of the Texas Division of the Mid-Continent Oil & Gas Association at Dallas, October 30. Average total tax on a barrel of Texas crude oil is now 8½ cents a barrel. But instances of taxes in excess of 10 cents a barrel are sufficient to make the tax men wonder how far the educators should go as they move away from 'readin, 'ritin and 'rithmatic. The process is expensive, for some oil country schools spend more dollars per pupil per year than any city school could provide.

The impression gained from listening to the tax experts was that they did not consider the oil country youngster as deserving inferior education but that they wondered if he should have superior education.

Tell It To Trustees, Not Solons

The tax conference revealed a new technique in tax matters. Instead of going to the legislature to fight taxes, losing, and then going back to oppose the next threat of increase, the tax expert now must get out in the school districts, and sit down with the trustees. They are trying to convince the trustees that the existence of a surrounding oil field is not justification for expanding the little red schoolhouse so greatly that fond parents need guides when they attend commencement exercises.

Drilling results

IN North Louisiana the chalk rock horizon of old Zwolle was extended 1½ miles south, and Sligo field, Bossier Parish, recorded the first commercial well in a deep sand. Out of four wells completed at Lisbon during the week, three resulted in extensions in three directions.

A new field was promised for the central Illinois Coal Basin by showing of a wildcat in Zif Township, Wayne County.

Kansas reported two new pools: one in Stafford County, three miles southeast of Gates field; the other northeast of Hall field in Russell County. A good well extended Habiger field, Ellsworth County. A half mile south of Otis a saturated core was discovered.

South Texas offered several developments. An 8000-foot field in Hidalgo County loomed as a wildcat tried to blow out. La Blanca field was extended more than half a mile. Cole sand was opened for production in Seven Sisters field of Duval County. In the same county a half-mile extension of Hoffman field was indicated. Nueces County took the lead in the district's news with the following: a new sand in the South Clara Driscoll field, a flowing well proved the worth of a new Frio sand in Clara Driscoll field, a wildcat drilling north of Agua Dulce looks like a pool opener, a 379-barrel well proves a deeper sand for McCampbell field.

Flank developments featured the Texas Coast. A new producing sand on the southwest flank of the old Orange field may revive drilling there. Another new sand has been found off the flank at Segno, Polk County.

In South Louisiana a Plaquemines Parish wildcat was showing 1500 feet of oil. The Lafitte field, Jefferson Parish, moved three-quarters mile east to rate as one of the largest pools in the district.

Michigan prices soared after the showing of a Secord Township wildcat in Gladwin County, nine miles northeast of Buckeye field.

Market briefs

Outlook—Hope felt that prices can be maintained.

Crude Market—Holding at same price levels.

Refined Oil Markets—Gasoline market remains unsteady.

CURRENT OPERATIONS

Week Ended	Daily Crude Production	Daily Crude Runs to Stills
October 30	3,602,950	3,345,000
Previous week	3,613,300	3,380,000
Year ago	3,043,500	3,040,000

CRUDE STOCKS

Date	Crude Oil (Barrels)
October 23	306,556,000
Week ago	307,897,000
Year ago	291,846,000

REFINED OIL STOCKS

Date	Gasoline (Barrels)	Gas & Fuel Oil (Barrels)
October 23	66,836,000	121,070,000
Week ago	66,554,000	119,634,000
Year ago	57,982,000	114,307,000

DRILLING

Period	Wells Completed
Past week	614
Previous week	600
Year ago	475
Year Total:	
This year	25,025
Last year	20,620

Technology

LOW gas/oil ratios are recognized today as preventing the waste of a valued commodity and of a needed flowing energy. Consequently, engineers have turned their attention to the control of gas/oil ratios. Reduction by cementing through perforations in casing or liners have proved effective in several fields. The results of such operations are described intelligently on page 19 in an interesting article one of our staff men has prepared with the assistance of a number of operating concerns.

A somewhat affiliated article, as far as its subject matter is concerned, is the second part of M. L. Haider's "The Principles of Petroleum Engineering," on page 26. "Gas under pressure in the reservoir is the all-important source of energy in the production of oil," states the author. "Efficient use of reservoir energy results in the highest ultimate recovery, and inefficient use, or waste, of the reservoir pressure results in a loss in recoverable oil." It is unfortunate that these principles cannot be applied more generally.

There has been a noticeable increase in reconditioning of shallow stripper properties. What is taking place in the northern Mid-Continent along these lines is ably told on page 35.

The "dressing up" of a drilling rig pays on the job. The rig described on page 46 is on its tenth hole this year, yet the equipment has the appearance of being new. Such attention means long equipment life, and there has been little turnover in members of the drilling crews.

Do you know how to take care of your electric control apparatus, so as to get the best service from it after it is installed? An article on this subject, page 52, will be found educational.

Legislative Affairs

Cummings urges enactment of new anti-trust laws that clarify requirements . . . Ickes hopes for conservation department to save natural resources.

REVISION of anti-trust laws and the creation of a department of conservation are possible federal legislative actions that concern the oil industry. The administration is urging the changing the Sherman anti-trust act, particularly that it be clarified. This is a much stronger probability than is the creation of a department of conservation for the control of natural resources of the United States, which was declared necessary by Harold L. Ickes, secretary of the interior, last week.

Cummings proposes anti-trust law changes

Enactment of a totally new anti-monopoly act, to serve as a guide to business as well as to the government in the matter of trust law violations, was seen last week by Attorney General Homer B. Cummings as essential to the clearing up of the confusion now prevailing as a result of the uncertainties of the present statutes.

To accomplish this, Cummings declared November 3 a thorough investigation of all phases of the subject should be undertaken before any legislation is attempted, a procedure which admittedly would require several months and preclude any possibility of passing a new measure during the special session of Congress, as suggested by President Roosevelt.

The attorney general's views supported suggestions which have been made that the new statutes take into consideration the differing characteristics of the various industries and that in the case of the natural resource industries, particularly oil, it might be found desirable to lift some of the requirements of free competition and approach the problem from the point of view of conservation, possibly involving some type of federal control.

Study Is Required

"I do not think the problems involved can be solved without such a study," the attorney general said. "I do not think there is a speedy solution of the matter. It is going to require a great amount of research by disinterested parties.

"We are all concerned with breaking up monopolies. Monopolies and government cannot get along side by side. But how to eradicate monopolies without doing harm to legitimate enterprise is a matter of foremost consideration.

"We cannot tolerate monopolies on a large scale that result in enormous concentration of power. On the other hand, we must resolve these conclusions into law so that those who want to abide by the law will know what the law is. There is no panacea that can be offered. It is a large problem that cannot be solved quickly."

Ickes Wants Conservation

Ruthless exploitation of oil and other nautral resources, threatening our present national economy and casting a heavy cloud upon the future of the country, offers the necessary argument for establishment of a Department of Conservation, with the present Interior Department as a nucleus, contemplated in President Roosevelt's plans for reorganization of the government establishment, it was declared by Secretary of the Interior Harold L. Ickes November 1, speaking over a national broadcasting network.

Declaring that we must not continue to squander our natural resources as we have in the past, Ickes asserted "now we must ask those who received immoderate special benefits from the nation to do a bit in helping us to improve our national economy. * * * From those who got a barrel of oil, we may ask for a teacupful back—and already the shrieks of anguish from the greedy are heard throughout the land."

"Why is it," he continued, "that this country can so easily run a fever over the budget and at the same time fail to realize that we have squandered and are squandering our priceless heritage of resources which we could never replace?

"The reason is that there never has been and there is not today in the United States any one agency of government responsible for conserving our natural resources. There is no central agency of government charged with this task.

"This condition should not endure."

Oil in the Courts

Trust trial witnesses again do not substantiate prosecutor's contentions . . . Texas well spacing exceptions are upheld by Supreme Court.

AS the federal government's anti-trust suit against oil companies moved through its fifth week at Madison, with prosecutors still attempting to show premeditated conspiracy to bolster prices, indications from Washington were that the United States trust laws are apt to be revised and clarified (see "Legislative Affairs," page 11). Another important legal action of the week was the ruling of the Supreme Court on Texas' well spacing law, in which the commission's action in granting exceptions was upheld partially.

Madison trial

Government attorneys continued their efforts to show major companies entered an unlawful conspiracy to artificially raise spot market prices in the Mid-Continent and East Texas fields as the trial, which has been termed the most important proceeding under federal anti-trust statutes in more than a score of years, neared the end of its fifth week at Madison.

John Steiger, Tulsa market checker for Platt's Oilgram, one of the three defendant trade publications, was the prosecution witness that did the most to jolt the government's case during the past week. He not only failed to substantiate government charges set forth in the indictment, but volunteered information during direct examination considered damaging to the prosecution's case.

Steiger testified several times, in answer to questions of John Henry Lewin, special prosecutor, that in telephoning independent refineries for prices at which gasoline was being sold on the spot market he asked only for sales to jobbers. He said that although he knew sales were being made to major companies he did not consider them in compiling his market quotations.

The testimony of the government witness not only failed to substantiate, but actually refuted prosecution charges that the defendant trade journal "knowingly" published as open market quotations the "artificially high" prices the indictment alleges were paid by major companies to independent refiners as part of a buying program in 1935 and 1936.

"There were buying pools in 1934," Steiger declared, "during which major companies made purchases out of a centralized fund, but in 1935 the line-up was different. It was looser, and the individual companies were doing the buying. In our minds it was not a highly organized program. We repeatedly referred to it as 'inter-refinery buying' and 'major company buying,' and told its effect on the market."

Lewin sought to have the answer struck from the record, but Judge Patrick T. Stone denied the motion, terming the answer "very enlightening to this court and the jury."

In further examination, Lewin sought to show that quotations were offered by the "sellers" and no complete check was made to determine whether or not the price reported by the seller actually was paid. Declaring that there were few jobbers who bought in the open market "in our refinery area," Steiger said that

"we took the seller's word usually." However, he added, the Oilgram contacted brokers, who in turn sell to jobbers, and broker prices comprised a "double check" on jobber prices.

The witness said he gets his market information not only from major companies and independent refiners, but from brokers and other sources. The term "inter-refinery buying," he answered Lewin, referred to deals between two independent refiners as well as between major and independent refiners. Asked whether there were many sales between independent refiners, Steiger declared:

"You'd be surprised. There were quite a few of them." The major buying, however, exceeded them in volume, he added.

Two of the prosecution attorneys received sharp rebukes from Judge Stone for tactics followed in examining witnesses during the examination of Steiger. Lewin sought to "refresh the memory" of the witness in regard to alleged allotments of major companies to independent refiners in the operation of the alleged buying pools charged in the indictment, by having the court read from the grand jury testimony. When Steiger denied that he had testified before the federal grand jury that Thomas Fitzgerald, indicted official of Mid-Continent Petroleum Corporation, told him that major companies were "allotted" to independent refiners, Lewin had Judge Stone read from the witness' grand jury testimony on the point.

Maurice Hanning, counsel for Platt's Oilgram, declared that the grand jury testimony was not inconsistent with Steiger's present testimony and that, moreover, "it is very apparent that before the grand jury Mr. Lewin put words in the witness' mouth, and he shouldn't be allowed to continue."

When the court agreed that the questions were "very leading," Lewin replied indignantly: "I still think it was a proper procedure—a perfectly fair examination."

"And I still think it was very leading. Let's have no more discussion on it," Judge Stone declared.

Repeated references to the grand jury testimony failed to shake Steiger's testimony before the trial jury last week that sales to major companies by refineries were never priced higher than those to jobbers, although sometimes the prices were identical. The government charges that major company purchases were the factor in raising spot market prices and that this was accomplished by making purchases at "progressively increased prices."

"That grand jury testimony was all wrong," Steiger said. "It was built on a pyramid of hypothetical questions and answers."

When Hanning again said that it was apparent that Lewin had put words in the witness' mouth before the grand jury, Lewin replied heatedly: "That was a perfectly fair examination before the grand jury. It looks as though I were being tried here instead of the major oil companies."

Judge Rebukes Prosecutor

When Lewin attempted to get Steiger to testify regarding a conversation with J. B. Mosher, Cleveland, Steiger's superior, regarding the Oilgram's attitude toward purchases by major companies, Hanning objected to the question as not pertinent.

"This is a very important witness, and this is a very important part of the case," interjected Hammond E. Chaffetz, of government counsel. "We've heard three or four times today that what we're after is the facts. It seems to me the government should be allowed to bring them out."

When Judge Stone sustained Hanning's objection, Chaffetz thumped a book on the table and turned disgustedly away from the bench.

"What was that?" Judge Stone sharply asked Chaffetz.

Head bowed low, Chaffetz stood up and said, "I apologize, your honor. I'm deeply sorry. I'm very sorry indeed."

The court ignored the apology, and added: "That was highly improper. I resent that. I'll run this court myself. I did not expect you to do such a thing, Mr. Chaffetz."

Three More Months

As the trial proceeded through its fifth week, it became apparent that at least another three months would be consumed in taking testimony before the case is finally given to the jury. Government attorneys announced early in the week that they would need another month to complete presentation of their case, and defense attorneys said they would need at least two months. As the trial opened early in October, estimates on the length of trial ranged from 10 to 12 weeks. That it may run longer than 4 months does not seem unlikely.

Ten persons formerly conected with the Planning and Coordination Committee established under the petroleum

[*See Courts, Page 78*]

Labor Situation

Six hundred I. T. I. O. workers walk out although union disapproves . . . Pine strike not settled.

STRIKE of all employes of Indian Territory Illuminating Oil Company in the Oklahoma City field continued at a deadlock late last week. Union officials declined to order workmen back to the leases until the company reinstated 64 employes recently discharged. The union contention is that these men were discharged without regard to seniority rights. Company officials declined to enter into arbitration until work is resumed on the leases, which is said to be part of a previous agreement.

Meanwhile, Governor E. W. Marland announced he would investigate the labor difficulty. The Oklahoma Corporation Commission also will consider the situation, from the viewpoint of damage to wells and the producing formation.

Union Disapproves Strike

The strike drew the outlaw status when called November 3, as it was the result of action of employes of this one company. John L. Lewis, chairman of C. I. O., made a plea by wire that the men return to duty, as did Harvey W. Fremming, president of the International Oil Field Workers. Officials of the local union said the strike did not have their approval.

Word from Seminole was that workmen of the company in that area would walk out unless the Oklahoma City situation came to a status of mediation by 4 o'clock November 5. Company workmen at Wynona, Oklahoma, declined to walk out in sympathy.

This is the third strike in Oklahoma fields. At Healdton settlement following a brief period of martial law and negotiations carried on by a committee of citizens, who were named by the governor. Employes of W. B. Pine are still on strike in Seminole area.

All lifting equipment on I. T. I. O. leases was raised above fluid level before workmen left the leases. The strike involves 600 workmen, 235 wells, and 20,000 barrels daily output.

W. B. Pine, independent operator of Okmulgee, Oklahoma, last week was attempting to end picketing of 15 of his leases in the Seminole district. He went into district court seeking a restraining order to dislodge the pickets. Authorities indicated they would rule on the injunction application within the next 30 days. Meanwhile, one of the union organizers declared five points would be added to their demands unless Pine accepted in the immediate future. Additional demands would include: Guaranteed seniority rights; vacations with pay; shorter working hours; safer working conditions; and injury compensation.

Extensive plans are being made at present by officials of International Oil Workers Union to organize labor throughout the Texas oil belt. Several new local unions have been established at Vivian and Rodessa, Louisiana, and Atlanta and Lufkin, Texas. It is sought to organize further groups as soon as possible.

Standard Increases Thrift Fund

Standard Oil Company of New Jersey and subsidiaries, who inaugurated an annuity and thrift plan in January, 1936, recently made a distribution of $4,000,000 in the form of credits to be applied on the accounts of about 36,000 eligible employees participating in the plan. After two years the total thrift plan fund, which is made up of voluntary contributions by more than 90 percent of eligible employees, supplemented by regular and special deposits by the company, approximates $15,000,000. All domestic employees with a year's service, regardless of their participation in this plan, have received a minimum credit of $50. An additional contribution for the benefit of each participant in the plan, equivalent to approximately 22 percent of his own and the company's contributions during the period from November 1, 1936, to October 31, 1937, was made, so that 90 percent of the domestic employees eligible are benefiting by the two-fold contribution.

The company is contemplating extending this plan to workers in its foreign subsidiaries.

Proration Matters

Texas increases allowable more . . . New Fitts rules issued . . . Prorate Turner Valley wells.

TEXAS continued to readjust its original November allowable order last week, adding another 25,272 barrels to its daily allocation. However, the state's allowable is still 26,351 barrels below the recommendation of the Bureau of Mines.

As this action was taking place, Indiana, foreseeing a possible drilling campaign as a result of activity in neighboring Illinois, issued drilling regulations, and production at Turner Valley, Canada, was curtailed to 45 percent because of crowded transportation facilities. Both the Texas and Oklahoma proration agencies issued new rules applying to specific fields during the week.

Raise Texas allowable

Orders issued by the Texas Railroad Commission last week increased the allowable of 17 fields 25,272 barrels daily, and brought the total Texas November allowable to 1,386,949 barrels. The Texas allowable now is 35,272 barrels higher than the original November order issued on October 20. However, it is still 26,351 barrels below the figure recommended for the state by the Bureau of Mines in its monthly forecast of demand.

In each instance some particular problem or condition was specified as the reason for the increase. The largest portion of the increase was based on foreign demand or for supplanting foreign products.

Fields in the East Texas district received the largest increase, being raised about 15,000 barrels. Four fields shared in the higher allowable. The greatest hike was given the Talco field, which was raised 6711 barrels to 33,486 barrels. Completion of an asphalt plant in this field furnishes a new outlet that is expected to supplant foreign asphalt. The Cayuga and Sulphur Bluff fields were increased 3159 and 3259 barrels respectively for the same reason. Cayuga now has an allowable of 10,000 barrels, while Sulphur Bluff has 6600 barrels. The Van field was increased 2000 barrels to 22,716 barrels because of insufficient refinery supply.

Foreign markets entered into the picture in Southwest Texas. Plymouth was raised 2751 barrels to 14,404 barrels, Heyser 1093 barrels to 5492 barrels and Saxet (Frio) 4662 barrels to 22,115 barrels.

The Yates field was increased 4219 barrels to 28,000 barrels because of bottom-hole pressure increases during the past two years.

Conroe was advanced 4082 barrels to 38,702 barrels so as to equalize allowables. Louise was increased 337 to 1501 barrels.

All other changes were in West Texas fields, where the following alterations were made: Harper up 452 to 1340 barrels; Fuhrman advanced 170 to 1061 barrels; Foster raised 475 to 3124 barrels; Bennett increased 225 to 620 barrels; Wasson up 585 to 1577 barrels; Taylor Link up 195 barrels to 1272 barrels.

Fitts rules

An order of the Oklahoma Corporation Commission, issued last week, fixed rules governing lease-basis operation of wells in the Fitts pool of Pontotoc County.

Revision of proration rules for the Fitts pool will permit lower production costs and allow wells to be plugged back to shallower sands as field conditions change. The order gives producers the privilege of operation either on individual well allocations, a lease basis or a unit basis.

Since discovery Fitts has been under proration restrictions that require allowables to be taken from individual wells. This made individual tankage and treating equipment essential for each well. The lease basis will allow all production from one formation to go into one set of flow tanks and through one treating plant. The unit basis, which can be applied when the several producing formations of a lease are under one ownership, will permit full output of a lease to be handled by one assembly of surface equipment.

Along with the change in rules, the new Fitts order called for a cut of 18,854 barrels in the allowable of Upper Simpson sand wells, while 6854 barrels were added to Hunton lime wells. The total reduction in Fitts allowable was 12,000 barrels daily, the most substantial cut given any Oklahoma field in the move to reduce the allowable for the state 23,000 barrels below the recommendation of the United States Bureau of Mines.

Potentials at Fitts will continue to be calculated on a per well basis. But producers will have the privilege of going to the lease or the unit basis in production. The hearing developed evidence to the effect that wells, especially those producing from the Upper Simpson zone have reached the point of high gas/oil ratios. Under the new rules it will be possible to restrict wells of this nature or even shut them down and to make up the deficit from other wells of the same zone.

The order forbids producing from more than one Fitts formation in one well. Because of this plugging back will be the practice as wells become unprofitable. The recent drop in output from the 421 Upper Simpson wells indicates that the Hunton lime and next the Cromwell sand will be tapped by the deeper wells. The field has 438 Hunton lime wells. Only 30 Cromwell sand wells are producing. The field has one well producing from the Oil Creek sand.

[*See Proration, Page 85*]

Oil at Conventions

Annual meeting of API this week . . . Industrial Research's contribution to economic welfare, and production problems and trends to be featured.

EVERYTHING was arranged late last week for the Eighteenth Annual Meeting of the American Petroleum Institute, largest convention of the oil industry, which opens this morning at the Stevens Hotel in Chicago, and extends through Friday, November 12.

Official headquarters of the Institute, the registration desk, and the information bureau have been located in the reception hall of the Grand Ballroom, second floor of the Stevens Hotel. These facilities will be available from Monday morning, November 8, throughout the meeting. Secretary Lacey Walker will be in charge.

Headquarters for the Division of Production will be open Monday morning and operating through the meeting. Headquarters for this group has been established in Room 421-A, fourth floor of the Stevens Hotel, with Staff Engineer Jerry Stillwell in charge.

A tax exhibit has been installed near the registration desk in the reception hall of the Grand Ballroom.

The program for the 1937 gathering of the API calls for an additional day, which is to be devoted to committee meetings, of which more than 60 are scheduled. The work of the various committees is among the most important activities of the Institute. Monday and Tuesday are to be devoted entirely to committee meetings, with the exception of a Board of Directors meeting at 2:30 p.m. Tuesday, November 9. Committee meetings also will continue throughout the week.

General Sessions Program

Contributions of industrial research to the economic welfare of the United States is to be the featured subject of discussion at the general sessions this year. Guest speakers at these sessions include Charles F. Kettering, vice president and director of research for General Motors Corporation; Dr. H. E. Howe, editor of *Industrial and Engineering Chemistry;* and Congressman Wesley

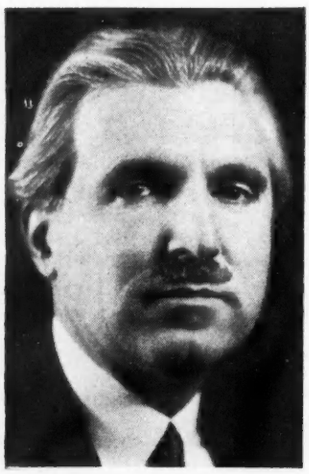
Officers of American Petroleum Institute

AXTELL J. BYLES
President

R. R. KINGSBURY
Vice President at Large

W. R. BOYD, JR.
Executive Vice President

W. S. S. RODGERS
Vice President for Refining



C. E. ARNOTT
Vice President for Marketing

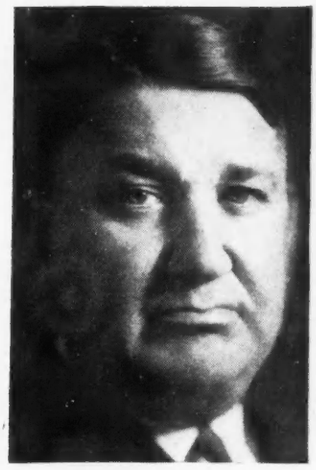
GEORGE A. HILL, JR.
Vice President for Production

O. D. DONNELL
Treasurer

LACEY WALKER
Secretary and Assistant Treasurer

J. S. COOKE
Assistant Secretary

Departmental Directors of the Institute



C. A. YOUNG
Secretary, Division of Production

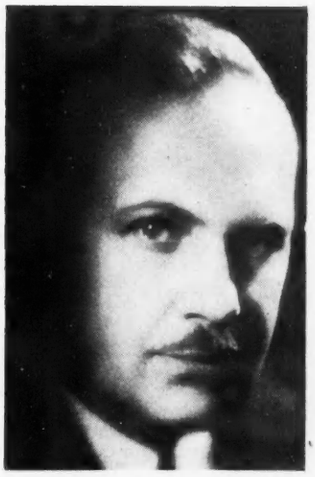
R. P. ANDERSON
Secretary, Division of Refining

D. V. STROOP
Secretary, Division of Marketing

FRED VAN COVERN
Director, Department of Statistics

H. N. BLAKESLEE
Director, Department of Accident Prevention

BAIRD H. MARKHAM
Director, American Petroleum Industries Committee

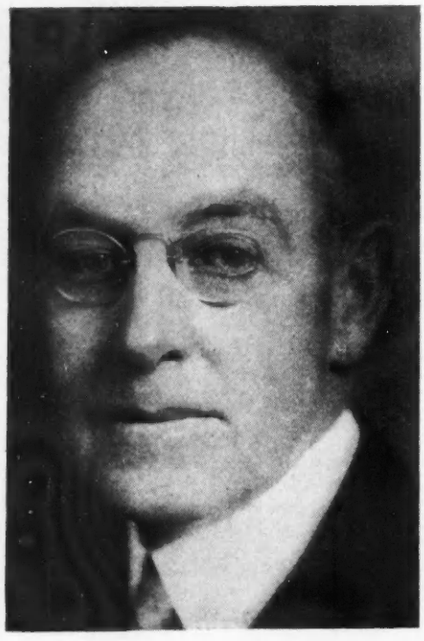


VICTOR H. SCALES
Director of Publicity

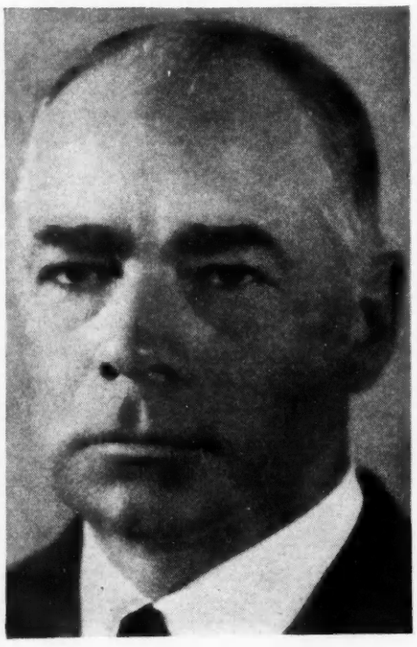
JERRY STILLWELL
Staff Engineer, Division of Production

J. A. McNALLY
Department of Public Relations

Executive Committee, American Petroleum Institute

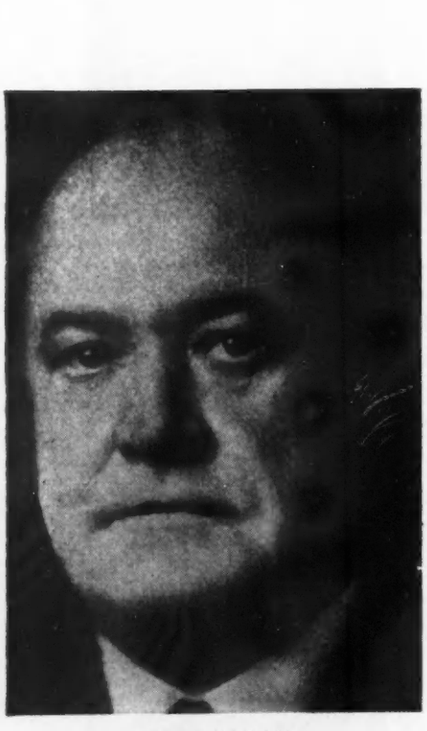


F. A. LEOVY
Gulf Oil Corporation, Pittsburgh

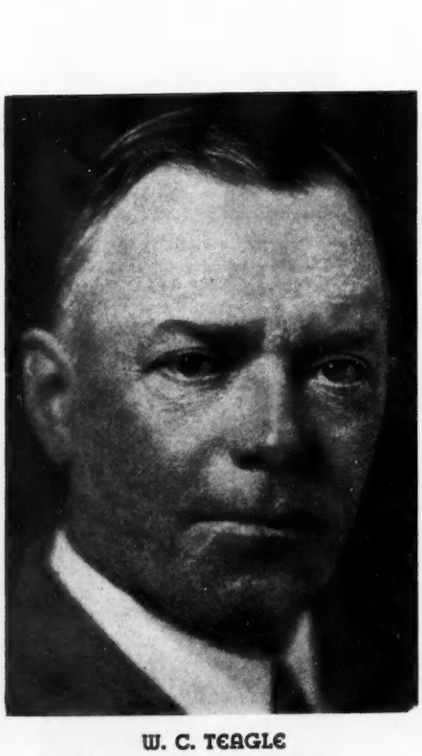


J. HOWARD PEW
Sun Oil Company, Philadelphia

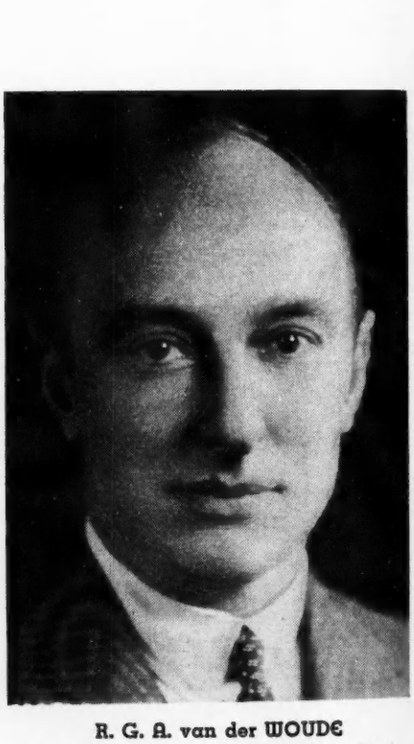
E. G. SEUBERT
Standard Oil Company (Indiana) Chicago



H. F. SINCLAIR
Consolidated Oil Company, New York

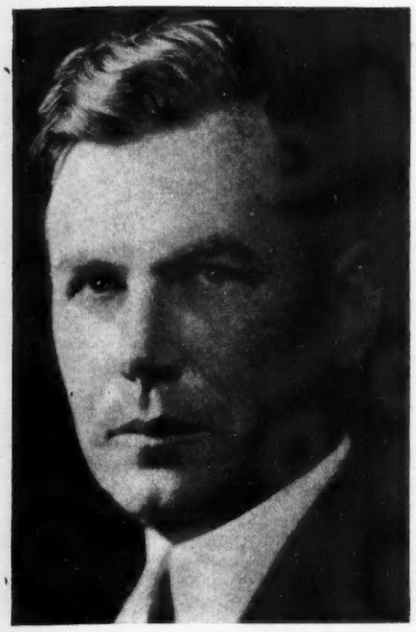


W. C. TEAGLE
Standard Oil Company of New Jersey



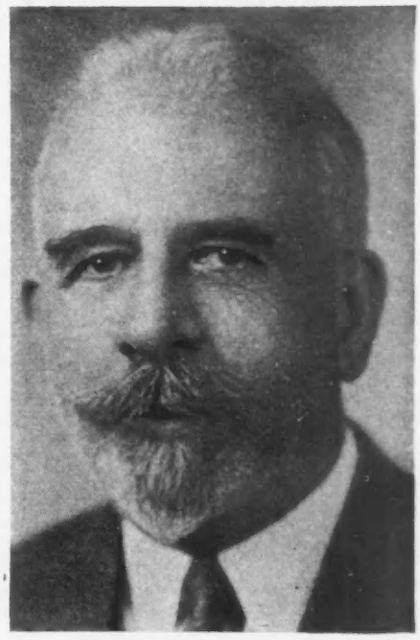
R. G. A. van der WOUDE
Shell Union Oil Corporation, New York

Guest Speakers of American Petroleum Institute



HON. WESLEY E. DISNEY
Member of Congress

CHARLES F. KETTERING
General Motors Corporation



DR. H. E. HOWE
Industrial and Engineering Chemistry

E. Disney, representative from Oklahoma.

The first general session will be held Wednesday afternoon, November 10. The annual "President's Address" will be delivered by the Institute's president, Axtell J. Byles. This session also will hear prepared addresses by J. D. Collett, of O'Keefe & Collett, Fort Worth, Texas, a member of the Institute's board of directors; and George A. Hill, Jr., president of Houston Oil Company of Texas, and vice president of the Institute's division of production. This session, which is to commence at 2:30 p.m., also is to see the presentation of accident-prevention certificate awards and the report of the board of councillors and election of directors.

The second general session is scheduled for Thursday afternoon, November 11, with Kettering, Congressman Disney and Dr. Howe as speakers. "The Significance of Petroleum Research—Its Value to the Public, Its Necessity to the Industry," is to be the subject of Dr. Howe.

The annual dinner, with a full program of entertainment, will be held Thursday night. There will be no speakers, or seating and table assignments. The cost of tickets is $5 per person.

Production Division Sessions

Research and drilling and production practices will be featured subjects of discussions at group sessions to be held by the Division of Production during the Eighteenth Annual Meeting of the American Petroleum Institute.

The first meeting of the Division of Production will be at 9:30 a. m., Thursday, November 11. This meeting will discuss research and production practices, and is sponsored by the Central Committee on Drilling and Production Practice. Blaine B. Westcott, of Gulf Research and Development Company, Pittsburgh, Pa., will preside. Papers and speakers are: "One Way of Finding Oil More Cheaply—A.P.I. Research Project No. 4," by Parker D. Trask, United States Geological Survey, Washington, D. C.; "Prevention of Oil Field Emulsions," by J. S. Surfluh, Standard Oil Company of California, Los Angeles; and "Oklahoma City Field Pumping," by B. M. Moroney, The Carter Oil Company and F. R. Wheeler, Barnsdall Oil Company, both of Oklahoma City, Oklahoma.

The second session of the Division of Production will be on production practices. It is to be held at 9:30 a. m., Friday, November 12, with W. E. Gilbert, Shell Oil Company, Los Angeles, presiding. Papers and speakers: "Gas-Oil Ratio Control in Flowing Wells," by R. J. Sullivan, The Carter Oil Company, Fairfax, Oklahoma; "Oil Well Performance—A Discussion and Proposed Terminology," by B. P. Kantzer and E. G. Trostel, Union Oil Company of California, Los Angeles; "Operation and Maintenance of Multi-Cylinder Gas Engines," by H. R. Hogaboom, Petroleum Equipment Company, Los Angeles.

The third and final Division of Production session will be at 2 p. m., Friday, November 12, with the papers to be on drilling and production practices. H. H. Power, The University of Texas, Austin, will preside. Papers and speakers: "Selection of Screen Openings for Unconsolidated Sands," by C. J. Coberly, Kobe, Inc., Huntington Park, Calif.; "Circumferential Field Welding of Casing," by L. R. Hodell, The Carter Oil Company, Tulsa; and motion pictures showing field welding of casing.

A special group session, sponsored by the Institute's Central Committee on Automotive Transportation, will be held Wednesday evening, November 10, for the presentation and discussion of technical papers on motor truck tanks. Leo Huff of The Pure Oil Company, Chicago, will preside.

To Elect 51 Directors

Terms of office of 51 directors, elected in 1935, expire at the Eighteenth Annual Meeting. These offices are to be filled by election, with nominations to be made by the Board of Councillors, which is scheduled to meet Wednesday, November 10.

Directors whose terms expire this year, each having served since 1935, follow:

Production Group—Pacific Coast: S. Belither, Shell Oil Company, San Francisco; W. C. McDuffie, Richfield Oil Company, Los Angeles. Rocky Mountain: B. B. Brooks, Consolidated Royalty Oil Company, Casper, Wyoming. Central United States: Burdette Blue, Indian Territory Illuminating Oil Company, Bartlesville, Oklahoma; J. Edgar Pew, Sun Oil Company, Philadelphia, Pennsylvania; Frank Phillips, Phillips Petroleum Company, Bartlesville; Charles F. Roeser, Roeser & Pendleton, Inc., Fort Worth, Texas. Eastern United States: O. D. Donnell, The Ohio Oil Company, Findlay, Ohio.

Manufacturing Group—Pacific Coast: R. D. Matthews, Union Oil Company of California, Los Angeles. Rocky Mountain: T. A. Dines, Salt Creek Producers Association, Denver. Central United States: H. R. Straight, Empire Oil & Refining Company, Bartlesville. Eastern United States: Charles

Presiding Officers, Division of Production Sessions

BLAINE B. WESTCOTT
Gulf Research and Development Co.

WALTON E. GILBERT
Shell Oil Company

HARRY H. POWER
The University of Texas

L. Suhr, The Pennzoil Company, Oil City, Pennsylvania.

Distribution Group—Rocky Mountain: W. H. Ferguson, Continental Oil Company, Denver. Central United States: E. G. Seubert, Standard Oil Company (Indiana), Chicago. Eastern United States: W. T. Holliday, The Standard Oil Company (Ohio), Cleveland.

Pipe Lines—Douglas S. Bushnell, Northern Group of Pipe Lines, New York; Harry Moreland, Great Lakes Pipe Line Company, Kansas City, Missouri. Tank Cars: L. J. Drake, Union Tank Car Company, Chicago.

Foreign Trade Group—Far East: H. D. Collier, Standard Oil Company of California, San Francisco. Mexico and South America: Richard Airey, Asiatic Petroleum Corporation, New York.

Supply Group—John A. Geismar, National Supply Company, Toledo, Ohio.

Natural-Gas Group—T. B. Gregory, Manufacturers Light & Heat Company, Pittsburgh.

Natural-(Casinghead) Gasoline Group—D. E. Buchanan, Hanlon-Buchanan, Inc., Tulsa.

At-Large Group (Elected by Members)—F. R. Coates, Cities Service Company, New York; J. D. Collett, O'Keefe & Collett, Fort Worth; W. N. Davis, Phillips Petroleum Company, Bartlesville; R. C. Holmes, Shinglehouse, Pennsylvania; H. T. Klein, The Texas Company, New York; F. A. Leovy, Gulf Oil Corporation, Pittsburgh; J. F. Lucey, Lucey Petroleum Company, Dallas; E. W. Marland, Oklahoma City, Oklahoma; E. B. Reeser, Barnsdall Oil Company, Tulsa; H. F. Sinclair, Consolidated Oil Corporation, New York; J. W. Van Dyke, The Atlantic Refining Company, Philadelphia; H. C. Wiess, Humble Oil & Refining Company, Houston.

At-Large Group (Elected by Directors)—C. E. Arnott, Socony-Vacuum Oil Company, Inc., New York; Paul G. Blazer, Ashland Refining Company, Ashland, Kentucky; E. DeGolyer, Felmont Corporation, Houston; J. Frank Drake, Gulf Oil Corporation, Pittsburgh; W. S. Fitzpatrick, Consolidated Oil Corporation, New York; N. V. V. Franchot, D. W. Franchot & Company, Olean, New York; Alexander Fraser, Shell Petroleum Corporation, St. Louis, Missouri; Jake L. Hamon, Cox & Hamon, Dallas; Robert H. Colley, The Atlantic Refining Company, Philadelphia; A. Jacobsen, Amerada Petroleum Corporation, New York; B. L. Majewski, Deep Rock Oil Corporation, Chicago; E. T. Moore, Dallas; T. A. O'Donnell, Los Angeles; W. S. S. Rodgers, The Texas Company, New York; E. L. Smith, Dallas; and T. P. Thompson, Jr., Pennsylvania Grade Crude Oil Association, Oil City, Pennsylvania.

Terms of 9 officers of the Institute and 75 members of the divisional general committees also expire at this meeting. These will be filled by election and appointment.

Production Nominating Committee

George A. Hill, Jr., of Houston Oil Company of Texas, Houston, Institute vice president for production, has appointed the nominating committee which will select members for the 1938 General Committee of the Institute's Division of Production.

R. S. McFarland, of Seaboard Oil Corporation of Delaware, Dallas, is chairman of the committee, which will have as members E. L. Adams, General Petroleum Corporation of California, Los Angeles; H. D. Atha, Gordon Oil Company, Mt. Pleasant, Mich.; L. L. Aubert, Bankline Oil Company, Los Angeles; L. E. Barrows, The Texas Company, Houston; E. H. Blum, The Atlantic Refining Company, Dallas; A. J. Galloway, Shell Petroleum Corporation, Houston; E. G. Gaylord, Standard Oil Company of California, San Francisco; D. R. Knowlton, Phillips Petroleum Company, Bartlesville; J. R. McWilliams, Standard Oil Company of Louisiana, Shreveport; Harry Moreland, Great Lakes Pipe Line Company, Kansas City; John G. Pew, Sun Oil Company, Dallas; J. French Robinson, Peoples Natural Gas Company, Pittsburgh; G. S. Sanders, Stanolind Oil and Gas Company, Tulsa; and S. G. Sanderson, Gulf Oil Corporation, Tulsa.

The Institute's Uniform Plan of Divisional Organization and Procedure requires 20 members of the general committee of each division to be elected annually by the enrolled members of the division during the annual meeting.

Geophysicists to meet

The Society of Exploration Geophysicists, Houston, will hold its regular fall meeting November 19 and 20, with headquarters at the Rice Hotel. A joint luncheon with the Houston Geological Society is scheduled for November 19, and a banquet will be given on the evening of November 20.

Following are some of the papers to be presented at the meeting: "The Motion of a Geophone on the Surface of an Elastic Earth," by W. T. Born, Geophysical Research Corporation, Tulsa; "Measurements of Relative Ground Motion in Reflection Recording," by

[*See Conventions, Page 80*]

Squeeze Cementing

REDUCES

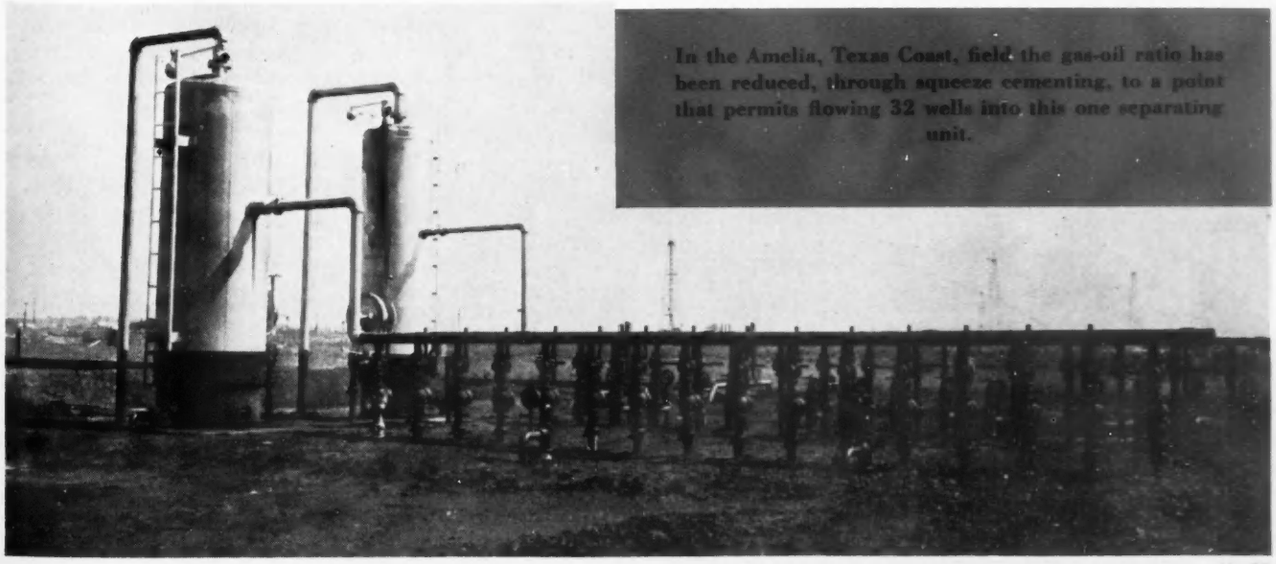
Gas-Oil Ratios

By BRAD MILLS, Associate Editor

THE reduction of gas-oil ratios by cementing through perforations in casing or liners has proved effective in several fields that normally produce too much gas. This phase of repair or completion work is commonly called a "squeeze job," the chief objective being to force or squeeze cement through perforations and into the offending formations. The adaptation of this practice to gas strata has restored to production many wells that formerly could not meet gas-oil ratio requirements. The squeezing of cement through perforations to shut off upper gas also has become part of the completion program in a Gulf Coast field. Incidentally squeeze jobs have brought a new problem, that of higher pump pressures than ever before encountered in cementing.

Ideas affecting the use of cement in oil wells have been changed or altered sharply during the past two years. Several oil companies, cementing companies, and cementing equipment manufacturers have established to their own satisfaction that cement will not set in live oil sand. Although this is a controversial point in some quarters, oil companies in every district do not hesitate to apply cement against gas or water formations, knowing that the cement also will come in contact with at least a part of the live oil sand. Recognition of this non-setting tendency has done much to overcome the prejudice toward use of cement in contact with or near the oil producing formation.

The cementing of casing above the full producing section has not proved an effective practice in several Gulf Coast fields that normally produce excessive qauntities of gas from the upper sand section. Operators have been forced to tolerate a limited production of oil from many troublesome wells, the compliance with gas-oil ratio requirements imposed by the State of Texas having reduced the oil production to a fraction of that which could have been produced under favorable con-

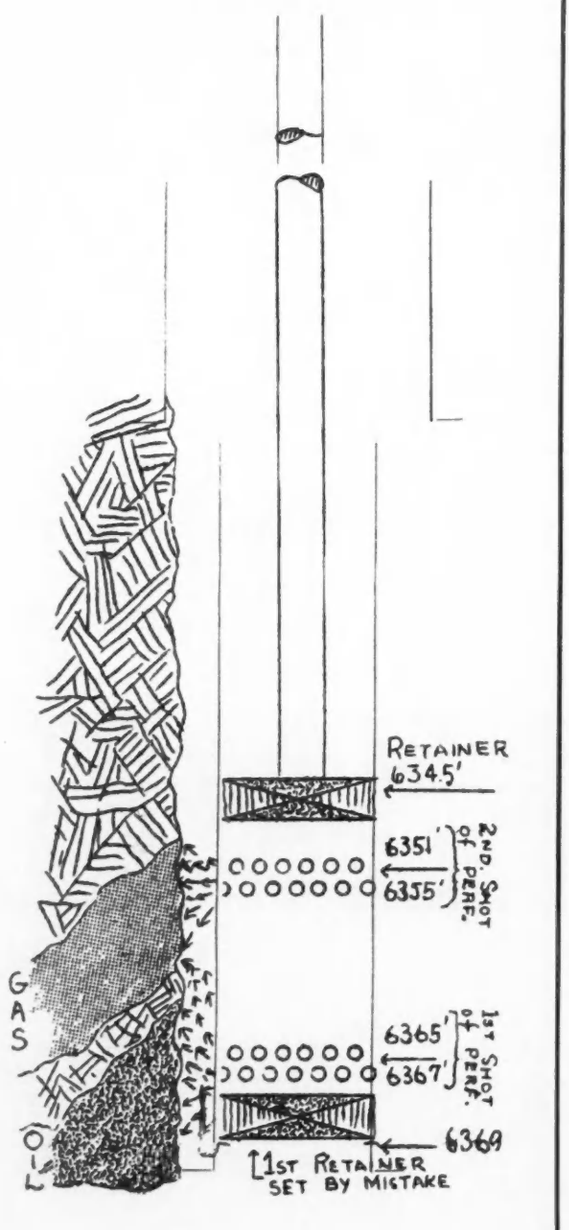


In the Amelia, Texas Coast, field the gas-oil ratio has been reduced, through squeeze cementing, to a point that permits flowing 32 wells into this one separating unit.

ditions. In such fields as Tomball and Lockridge, Texas, the thin producing section is gassy and lacks uniformity. Exclusion of gas originally not affected by the primary shutoff now is desired in several fields of this type.

Where the maximum gas-oil ratio allowed in Texas fields is 2000:1, a well flowing with a 4000:1 gas-oil ratio is permitted to produce, but production of oil must be held to half of the allowable. The high gas-oil ratio of many wells has made their operation an economic impossibility. It is obvious that reduction of the gas-oil ratio through repair work places the operator in an improved position. Previous experience with high shut-offs also has taught producing companies the necessity for lower cementing operations during actual completion work. An outstanding example of this practice will be discussed in this article.

The gas-oil ratio in this well, Kirby Petroleum Company's Baker 1, in the Lockridge, Texas, field, was reduced from 10,000 to 1 to 600 to 1 by squeezing cement through perforations opposite the offending gas sand. The first retainer was set too low by mistake, but the second completion attempt was highly successful.



Preliminary Procedure

In high gas-oil ratio wells it is necessary to attend to several preliminary details before attempting a squeeze job. Clear water should be applied to the formation to determine the pressure at which the offending strata takes water. Cementing equipment manufacturers, oil companies and cementing companies, have been able, through practice and analyses, to develop a method of attack from a study of the action of the formation under water pressure.

Although the bottom-hole temperature influences operations, the pressure at which the formation takes clear water is the chief governing factor in the selection of the cement and the nature of the mix. Where the formation will not take clear water at a pressure of 2500 pounds, a very thin mixture of slow-setting cement is required. A four-hour cement now is used under this condition. When the formation starts taking water at a pressure of 1500 pounds, the pressure usually drops to about 900 pounds after 15 barrels of water have been pumped in.

Gas-Oil Ratio Reduced

Several Gulf Coast companies have reduced effectively the gas-oil ratio in old producing wells by perforating the casing near the gas-oil contact, and squeezing cement into the offending formations. In extreme cases the gas-oil ratio has been reduced from more than 50,000:1 to less than 500:1. The use of cement opposite live oil sand apparently has not affected that portion of the formation producing oil, but in most cases it has proved effective in shutting off gas that originated above the oil sand. In difficult squeeze jobs the cement has been forced through perforations opposite the top of the oil sand, the ability of the well to produce oil not having been affected.

Kirby Petroleum Company recently completed a successful squeeze job in Baker 1, a troublesome well in the Lockridge, Texas, field. Before the repair work was attempted this well produced 96 barrels of oil per day with a gas-oil ratio of 10,000:1. Depth of the well was 6369 feet, and 7-inch casing was cemented on bottom. Bottom-hole temperature was 130° F.

The first cement retainer apparently was set too low by mistake, and the original effort to squeeze cement through perforations was a failure. In this first attempt the casing was perforated with 10 holes from 6365 to 6367 feet, but after the retainer was set in error at 6369 feet, no water could be discharged at a pressure of 3600 pounds. The retainer obviously should have been set immediately above the gun perforations.

In the second and successful attempt to reduce the high gas-oil ratio, the casing was perforated opposite the gas stratum between 6351 and 6355 feet, and a retainer set at 6345 feet. Thirty sacks of cement were pumped through the perforations and into the formation, the initial pressure having been 2500 pounds and the final pressure 3500 pounds.

After the cement and retainers were drilled out, tub-

DOUBLES BELT LIFE on BEAM PUMP DRIVE

GETTING a belt to stay on the pump of a certain 2,900 foot well in the Tonkawa, Oklahoma field was a real problem. Belt after belt had been tried but the heavy load of pumping 750 barrels a day with no gas pulled some belts in two inside of three months. The longest any belt lasted was only six months—*that's how hard a pull it is!*

The owners put the problem up to the G.T. M.—Goodyear Technical Man—and on his recommendation a Goodyear COMPASS "400" Endless Cord Oil Well Belt 113' 5" long by 14" wide was applied after careful analysis of the drive.

For 13 months, *over twice as long as the best previous belt,* the COMPASS pulled this well before going out under the heavy overload. Not only did it last longer but the pumper states that throughout its life it handled the drive more efficiently than the other belts.

Consult the GM

Such outstanding performance with corresponding reduction in belting cost is typical of the Goodyear COMPASS Cord Oil Well Belt. Its patented endless cord construction eliminates clamps—it is the most nearly stretchless belt obtainable. It handles heavy-duty belt-killing drives like the above with a minimum of trouble—as thousands of oil men enthusiastically testify. Why not see what the G.T. M. could do for you? To bring him to your rig, just write Goodyear, Akron, Ohio, or Los Angeles, California—OR THE NEAREST GOODYEAR MECHANICAL RUBBER GOODS DISTRIBUTOR.

GM-Specified
GOODYEAR COMPASS "400" OIL WELL BELT
113'5" x 14" ENDLESS
for BEAM PUMP DRIVE
18" DIA. IDLER
18" DIA. CLUTCH ON ENGINE
40 H. P. ENGINE
BELT SPEED 1000 F. P. M.

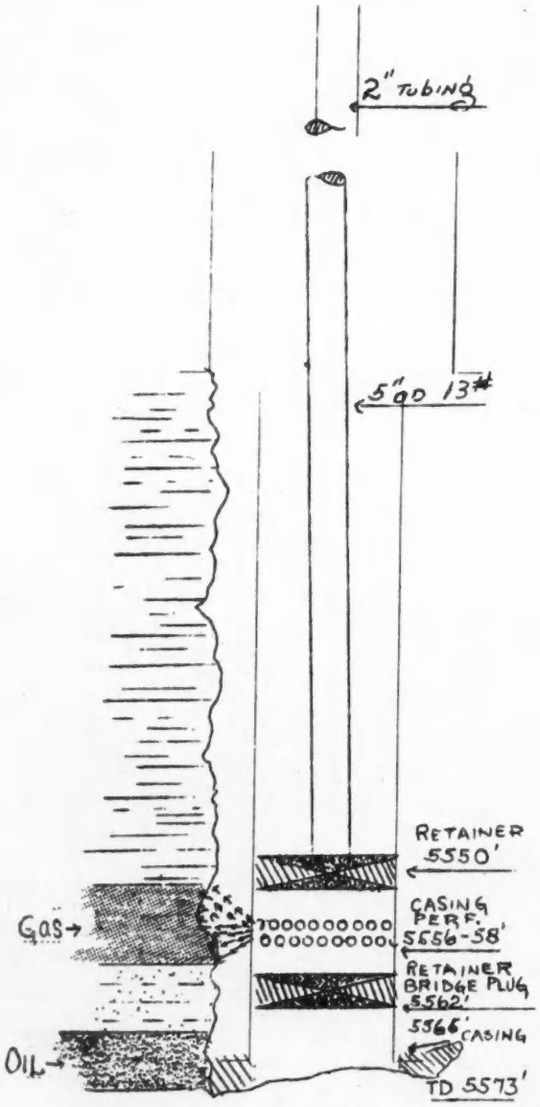
BELTS
MOLDED GOODS
HOSE
PACKING
Made by the makers of Goodyear Tires

THE GREATEST NAME IN RUBBER
GOODYEAR

ing was run to bottom. The well was washed with water, then with oil, and soon came in through the perforations that had been used for squeezing the cement into the formation. The action of the well virtually proved that the cement did not set in the live oil sand, since the original failure to discharge water at 3600 pounds indicated the only passage for fluid would be through perforations.

On a 24-hour potential test, Baker 1 produced 624 barrels of oil with a gas-oil ratio of 600:1. The cement squeezed into the gas stratum was effective in restoring the well to a satisfactory producing status. Although the upper perforations opposite the gas stratum were regarded as the primary point of exit for the cement, the lower perforations opposite the oil zone also were open. The cement was free under the high pressure to leave the casing through both the upper and lower set of perforations, but the well undoubtedly came back in flowing through the perforations opposite the live oil sand.

A squeeze cement job completed recently in the Tomball, Texas, field. By squeezing cement through the perforations below the retainer the gas-oil ratio was reduced sharply, and the well as a result was permitted to make its full oil allowable.



A Tomball Job

The gas-oil ratio in Shell Petroleum Corporation's Pitchfork 1, Tomball, Texas, producer, has been reduced from 58,000:1 to 400:1 by an effective squeeze cementing job that shut off the upper gas stratum without damage to the main body of the oil zone. This well was completed originally at 5573 feet, and the 5-inch casing had been cemented at 5565 feet. The indicated bottom-hole temperature was 136° F. The gas-oil ratio was so high that a reduction was required to prevent the production of the gas allowable far ahead of the oil allowable. The Tomball field produces from a very thin and gassy formation, and the high gas-oil ratio has reduced the production of oil in many wells.

A bridge plug was set at 5562 feet, the casing perforated from 5556 to 5558 feet, and a cement retainer set at 5550 feet. The perforations were placed as nearly as possible opposite the offending gas stratum. A small amount of fresh water was pumped into the formation ahead of the cement, the initial pressure having been 2000 pounds and the final pressure 1500 pounds. Seventy-five sacks of cement were mixed and squeezed through the perforations, the initial pressure having been 1500 pounds and the final pressure 2200 pounds.

The cement, retainer and bridge plug were drilled out, and the well brought back on production with a potential flow of 176 barrels of oil through a quarter-inch choke. The gas-oil ratio was only 400:1, a radical reduction from the original ratio of 58,000:1. A cement retainer was used as a bridge plug.

In this well the cement set readily in the gas sand, but did not affect the oil zone. Although the cement was directed primarily toward the offending gas formation, no special effort was made to confine it to a very small area near the perforations. Any cement that contacted the oil stratum apparently did not set in that part of the formation.

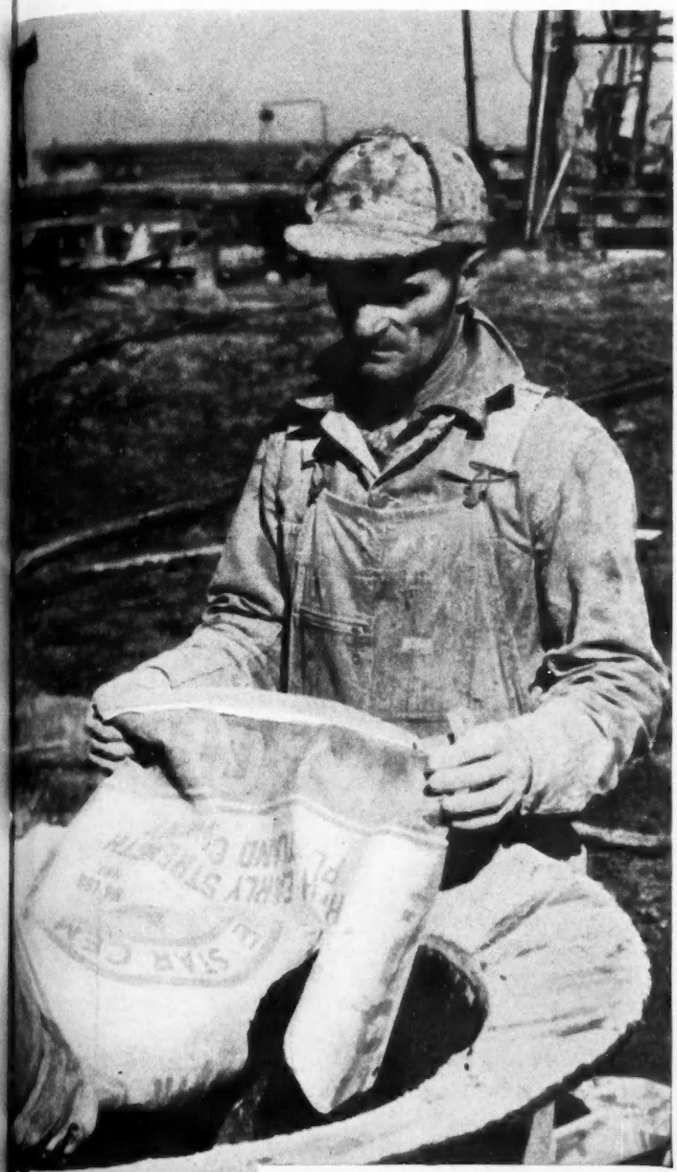
High gas-oil ratios in the Tomball field have given trouble since the first wells were completed, and operators have made various efforts to reduce the flow of gas. In many wells the maximum quantity of gas is produced long before the oil allowable is obtained. It is obvious that the satisfactory reduction of gas-oil ratios will permit production of full oil allowables in wells that now produce more than 2000 cubic feet of gas per barrel of oil.

Amelia Practices

Humble Oil & Refining Company has developed a unique completion practice in the Amelia, Texas, field, where a thin oil producing section and an overlying gas cap gave trouble in wells completed in the conventional manner. Squeeze cementing through perforations located immediately below the gas-oil contact has given a satisfactory gas-oil ratio in all recent completions in the field. The squeeze jobs have followed the regular cementing operations, both having been a part of the latest completion program. The gas-oil ratio also has been reduced by squeeze cementing in the older wells that were placed on production after the conventional cementing operations had been completed.

The gas-oil contact, or top of the oil zone, is encoun-

JINX JOBS



'STARCOR' TAKES THE CURSE OFF 'EM

SOME jobs just seem to be jinxed. Plan 'em as carefully as you will—still things go wrong. Just cussedness, maybe. Take this one, drilled recently in San Patricio County, Texas —5800 ft. of 5" casing in a 6½" hole. Only about half an inch between casing and wall of hole for cement to flow through—and don't forget the collars. But the crew knew its stuff—and everything would have been o.k. if the jinx hadn't stepped in.

Mud pumps went out twice. Measuring line snapped as it was introduced in the hole. Flow line developed a leak. Small things, but they all took time, and a 45-minute job dragged for two hours. Ordinary cement might easily have set, long before it reached bottom—and then the fat would have been in the fire for sure.

Lucky they used 'Starcor'. Because this Oil Man's cement is timed to set slowly—allowing ample leeway in case of delay. The safety factor is built into the cement itself. Use 'Starcor'* on your next deep-well job. On wells of moderate depth, use 'Incor'*—it's an Oil Man's cement, too—with a ten-year success record on thousands of wells. Your nearby dealer stocks them both.

*Reg. U. S. Pat. Off.

TWO PORTLAND CEMENTS—BOTH MADE FOR OIL WELLS

USE 'STARCOR'—for deep wells, high temperatures or extra sulphate resistance.

USE 'INCOR'—for wells of moderate depth.

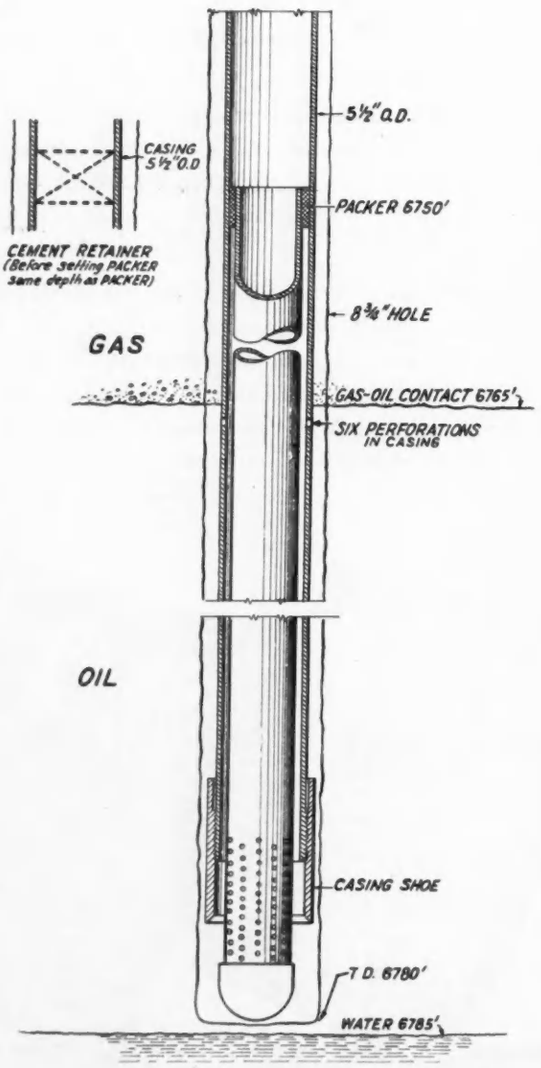
LONE STAR CEMENT CORPORATION

MAKERS OF LONE STAR CEMENT • 'INCOR' 24-HOUR CEMENT • 'STARCOR' CEMENT

tered at a depth of about 6765 feet. The break between the gas formation and oil sand is sharp, but the depth to the top of the gas zone above the oil level is not uniform, assuming an anticlinal or arched position. The gas zone shows a high pressure and enough volume to give trouble when attempting to produce only the oil zone. The oil sand in inside wells is about 20 feet thick, and exact measurements for top of the oil sand, total depth, casing points, cementing, and perforating are a necessity in the fight to obtain a low gas-oil ratio.

In completing a well at Amelia under the new program, the company drills an 8¾-inch hole to 6750 feet. The size of the hole at this depth is reduced to 6¾ inches for coring, and continued as a core hole of this diameter to 6780 feet. In coring the full section between 6750 feet and the total depth of 6780 feet, a complete record of the producing formation is obtained. Normally in a well of this depth, the bottom of the oil zone, or top of the water zone, would be found at a depth of about 6786 feet. An electrical logging device is run to check the data obtained from coring operations. The 6¾-inch section of the hole is reamed to a full 8¾ inches after coring and logging data are gathered and checked.

Humble Oil & Refining Company's completion method in the Amelia field, Texas Gulf Coast. Gas above the oil zone gives trouble unless it is carefully cemented off.



A full string of 5½-inch O.D., 13-pound casing is run and cemented at 6777 feet, which is three feet off bottom. In cementing this light casing string, 250 sacks of regular and 50 sacks of special cement are used. The cement is drilled out to 6770¾ feet, the top of the undrilled cement at this depth serving as a plug or anchor for the gun perforator. With the normal gas-oil contact at 6765 feet, the casing is perforated between 6766 and 6770 feet with six shots. A cement retainer is set at 6750 feet and 75 sacks of cement squeezed through the perforations. It is estimated by the company that about 50 sacks of the cement go to the formations and 25 come back as returns. After the cement has set for 36 hours it is drilled out to bottom. This gives three feet of open hole below the casing shoe. The packer and screen assembly consists of a packer set at about 6750 feet, and 10 feet of 4½-inch screen on bottom of the blank section. Since the screen also is set at the bottom of the hole, this arrangement places a maximum of three feet of screen below the casing shoe. A string of 2-inch, upset tubing is run to a point near bottom and the well produced through this small outlet. This completion method has proved effective at Amelia, and the gas-oil ratio in many wells has been less than 500:1.

Occasionally a well has shown an excessive gas-oil ratio, despite the usual care in completion work. Such a development indicated that the well had been completed slightly too high in the producing formation. Due to the sharpness of the gas-oil contact and the limited thickness of the oil zone, exact measurements are required to place the cement at the proper level during the squeeze job.

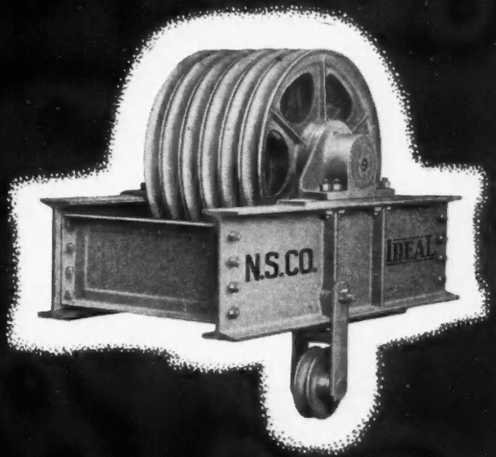
The high gas-oil ratios have been corrected in the few wells that failed to flow satisfactorily after the first completion effort. In such completions the company pulled the packer and screen assembly, and drilled a few feet deeper. The maximum amount of new hole made has been six feet, the high gas-oil ratio having indicated that it was safe to drill slightly deeper into the oil zone for recompletion.

In the second completion attempt, a short string of 4½-inch inserted liner has been run. This liner has been perforated opposite the zone originally included below the 5½-inch casing (6777-6780), and the cement squeezed through the new perforations to shut off the gas that originally caused the trouble. The bottom three feet of the 3-inch liner ultimately run is perforated, and the well brought in again. Of the few correction or recompletion jobs at Amelia, all have proved successful, each second attempt at squeezing cement into the offending formation having been carried out from calculations derived from the original well action.

All depths cited in Amelia completion operations were based on a gas-oil contact at exactly 6765 feet. Although this depth makes a good average, the gas-oil contact varies slightly from the arbitrary level taken to illustrate Humble Oil & Refining Company's completion practices. Where the gas-oil contact is found two feet above or below the 6765-foot average, cementing and perforation depths are varied corresponding distances above or below those given in the foregoing paragraphs.

IDEAL ROTARY EQUIPMENT
FOR THE DEEPEST DRILLING

IDEAL
SINGLE SHAFT CROWN BLOCKS
TYPE 648-R



360 Ton Capacity . . . Six 48" Dia. Manganese Casing Line Sheaves . . . Heat Treated Chrome Vanadium Steel Shaft 10¼" Dia. . . Ideal Heavy Duty Bearings. . . . Weight 10450 lbs. . . . Other Ideal Single Shaft Crown Blocks in a complete range of capacities from 80 to 240 Tons.

IDEAL
TRAVELING BLOCK
TYPE C 76"

For the Heaviest Rotary Service . . . Available in 4, 5, and 6 Sheave Types . . . Sheaves 42" Dia. Manganese Steel . . . Center Pin 8¾" Dia. Alloy Steel Forging . . . Ideal Heavy Duty Roller Sheave Bearings . . . Weight 9177 lbs. . . . Other Ideal Type C Traveling Blocks in 54" and 66" Dia.

NSCO
REG. U. S. PAT. OFF.

National

THE NATIONAL SUPPLY COMPANY

DIVISION OFFICES: PITTSBURGH, PA., FORT WORTH, TEXAS, TULSA, OKLA., TORRANCE, CALIF. - MAIN OFFICE: TOLEDO, OHIO

The Principles OF Petroleum Engineering[1]

By M. L. HAIDER, The Carter Oil Company

PART II

In Part I of this article, published in a recent issue of The OIL WEEKLY, the author outlined briefly some of the basic principles governing the underground habits of oil and gas.

Part II, published herewith, is a continuation of that outline to completeness, plus a correlation of these principles with the laws governing the production of oil and gas.

IF all the wells were operated at the maximum rate in a pool which had a natural water drive, the result would be a very rapid decline in the reservoir pressure, liberating from solution additional quantities of gas and causing irregular encroachment of water. This would result in a rapid increase in the gas/oil ratio and no benefit whatever would be derived from the water drive. This undoubtedly would result in a reduction in ultimate recovery, so that in such cases it would be advisable to restrict the rate of production and produce at a temporarily higher gas/oil ratio in order to produce with a lower overall gas/oil ratio and obtain a uniform encroachment of water.

The proper utilization of gas energy in the field usually requires a variation of operating methods from well to well to suit best the conditions of the individual wells. The most efficient utilization of gas is attained when the gas moves with the oil so that the gas/oil ratio approaches as nearly as possible the amount of gas dissolved in the oil at the existing reservoir pressures.

3. **Mechanical means of Controlling Gas Production.** Various methods have been utilized for reducing the amount of gas produced per barrel of oil. Some of these are: Lowering the tubing, back-pressuring the well, bottom hole chokes, tapered tubing, cementing liners in the well, and formation packers. Of these, the first four yield results which generally are only partially effective in that while they reduce the gas/oil ratio, the ratio quite frequently is still excessive. In studies which have been made, it appears that in cases where free gas exists above the oil, the most satisfactory method of reducing the gas/oil ratio is by some mechanical means, such as cementing off the gas section or setting a formation packer to shut off the gas section.

4. **Shut-in or Restrict High Gas/Oil Ratio Wells**—Wells which produce with excessive gas/oil ratios should be either restricted in the amount of gas which they produce, or should be shut in entirely. Whenever possible, the latter procedure is desirable. There have been numerous cases where wells drilled on the high part of the structure which were permitted to blow large quantities of gas to the air in order to recover a relatively small amount of oil produced increasing amounts of oil and eventually were classified as oil wells. However, this is only possible at the expense of an enormous waste of gas energy and, although conversion of a gas area into an oil producing area might be profitable for that particular operator, it results in a material loss in recovery for the pool as a whole. The blowing of large volumes of gas from wells located on top of a structure is one of the most flagrant violations of the principle of conservation.

Unquestionably the owner of a well on the top of a structure which will produce gas only, or produce oil and gas at a high gas/oil ratio, is entitled to some return, but he should not be permitted to so operate his well as to cause a reduction of the ultimate recovery of the pool. In a strict engineering sense, such instances can measurably be taken care of by allocating to each well or tract a certain volumetric withdrawal from the reservoir of gas in the one case or of both oil and gas in the other[10], thus permitting the owner in a gas area to realize a fair return on his investment and at the same time not unduly prejudice the owners of acreage down structure.

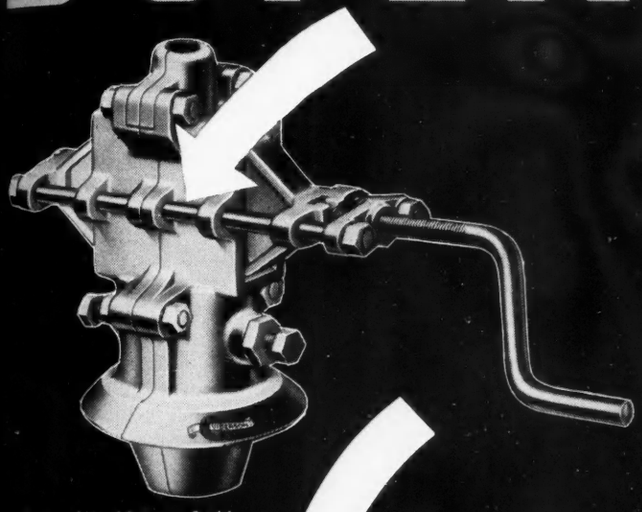
Police Might Be Necessary

It is probable that a police statute carrying out this principle, and at the same time reasonably protecting all of the operators in the pool in the enjoyment of their common property, the reservoir energy, might be necessary. In contrast, under the law of capture an operator would be permitted to blow the gas to the air if he so chose, regardless of the effect on his neighbor, or the recovery of the pool as a whole.

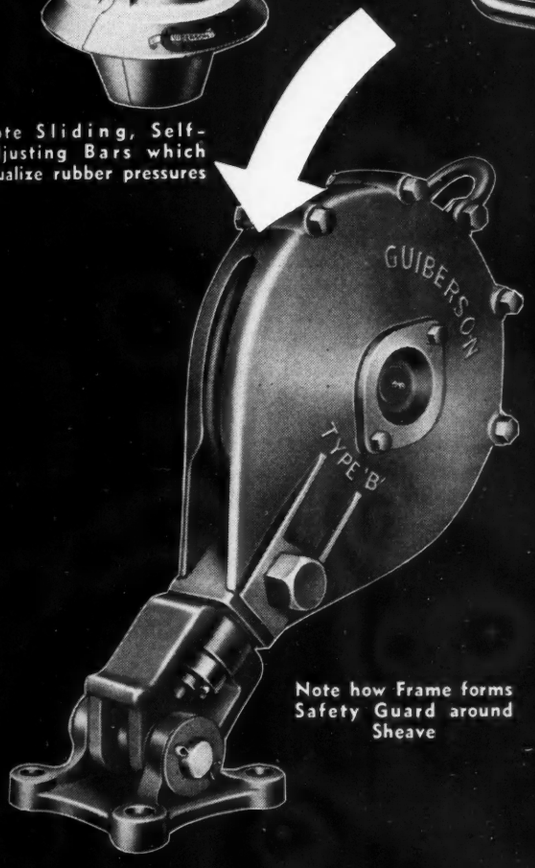
Since withdrawal of any fluid from the reservoir causes a reduction in the reservoir pressure, it is essential that the water production also be curtailed. A barrel of water withdrawn from the reservoir has the same effect upon the reservoir pressure as does the withdrawal of a barrel of oil. Control of water production is largely a mechanical

[1] Presented before the Minerals Division of the American Bar Association in Kansas City, Missouri, September, 1937.

2 EXAMPLES OF GUIBERSON MECHANICAL SUPERIORITY



Note Sliding, Self-Adjusting Bars which equalize rubber pressures



Note how Frame forms Safety Guard around Sheave

It has been Guiberson's policy, from the start, to introduce tools—not on a competitive basis—but only where there was definite opportunity for improvement. The tools here shown illustrate this point.

Self-Equalizing Rubber Pressures

The GUIBERSON Wire Line Oil Saver introduced (1) automatic rubber adjustment, and (2) new operating economy.

The patented feature of this device is its self-adjusting pressure on the opposing rubbers, obtained through sliding bars (see arrow). When pressure is applied by the crank, it is automatically equalized on the opposing rubbers by these bars. No separate tightening of rubbers causing uneven pressure and wear, and misalignment of rope. Rubber and rope wear are reduced. Oil is saved.

Safety Guard Around Sheave

In even so simple a device as a floor block, Guiberson found room for improvement.

Advantages of GUIBERSON Floor Blocks are (1) that they "stand up" off the floor (lateral movement is only 45 degrees each way); (2) frames can be set over line without threading it through block; (3) sheaves swivel on roller bearings; (4) in Type B Model, frame forms complete safety guard (see arrow).

GUIBERSON Observes A.P.I. Specifications to the Maximum Extent

THE GUIBERSON CORPORATION
Box 1106, Dallas, Texas
Field Representatives In Every Active Field

BETTER BE SAFE THAN SORRY
GUIBERSON

GUIBERSON

operating problem which usually can be solved satisfactorily.

Well Spacing

The correct spacing of wells in the pool is an important factor in controlling the efficiency of operation of the entire pool. Much has been written on the subject of well spacing and the relationship of well spacing to ultimate recovery. However, our knowledge of the hydrodynamics of reservoirs is not advanced sufficiently to be able to evaluate properly all of the factors which determine the correct well spacing. The determination of proper well spacing is one of the most important problems which face the petroleum engineer at the present time. During the last few years, due to the advent of restricted withdrawals and the resultant curtailment of production, the industry in general has come to realize that the close spacing of wells as practiced in the past is unnecessary to recover the oil. In fact, many petroleum engineers today are convinced that with proper control of production it will be possible to recover a larger amount of oil than has been the case in the past, in spite of the fact that wells are spaced much more widely than has been the practice.

Effects of Close Spacing

The close spacing of wells can be considered to reduce the ultimate recovery of the pool from two standpoints:

Drainage Interference

1. The drainage radius of a well has been defined as the area affected by the reduction in pressure due to withdrawal of oil and gas from the well. This, theoretically, could be the entire producing formation. Actually, the drainage radii at a number of wells will intersect as the reduced pressure area spreads from the well, causing well interference. Wells spaced too closely will cause well interference early in their life, and thus cause a rapid decline in the reservoir pressure, permitting dissolved gas to be liberated and cause excessive gas by-passing. The result is inefficient utilization of the reservoir energy and, therefore, a reduction in the ultimate recovery of the pool.

Less Oil Per Well

2. In pools of the water drive type there is a maximum rate of production at which the reservoir pressure can be maintained. In order to utilize to the utmost the natural water drive, it is therefore necessary to restrict the total production from the pool to this maximum value. Since the total production for the pool is apportioned among the wells in the pool, it is obvious that having a fixed total production, the greater the number of wells, the less the production per well. There is for each well a minimum economic rate which must be maintained in order for the operation to be profitable to the owner.

Per Well Rate Often Low

It is frequently the case that when the efficient rate of production for the pool is distributed among the wells in the pool, the production per well is extremely low. This is illustrated forcibly in the case of East Texas, where an attempt has been made to curtail the total production from the pool so as to take advantage of the natural water drive. The excessively close spacing of wells has resulted in extremely low allowables per well. In pools of the gas energy type which are closely spaced, a reasonable withdrawal per well results in a high withdrawal from the pool, causing rapid decline in reservoir pressure with the attendant high gas/oil ratios and waste of reservoir energy resulting in a lower ultimate recovery from the pool.

South Burbank Example

As a case in point which illustrates the advantages which can be gained by proper well spacing and efficient utilization of the reservoir energy, I might cite the South Burbank pool of Osage County, Oklahoma.[11] This pool is in all respects very similar to the old Burbank pool, and therefore a direct comparison of these two pools can be made. The old Burbank pool was developed on a 10-acre pattern and allowed to produce without restriction. Production from the pool has reached the stage where estimates of total ultimate recovery are fairly reliable. In contrast with the old Burbank pool, the South Burbank pool which was discovered in January of 1934 was drilled on a spacing pattern which averages approximately 18 acres per well, and the production has been curtailed from the very beginning. In June of 1935, approximately two-thirds of the pool was unitized for the purpose of carrying out a pressure maintenance program. The pressure maintenance program was initiated immediately after formation of the Unit, and at the present time the Unit is returning approximately 15,000,000 cubic feet of gas per day to the producing formation. While this project has not progressed far enough to predict definitely the ultimate results, data obtained to date indicate that the recovery per acre will be greatly in excess of that obtained in the old Burbank pool. The production from the Unit is almost entirely by natural flow, less than 2 percent being produced by sucker rod pumping.

What Might Have Happened

Engineers are agreed that had the pool been developed in the same manner as was the old Burbank pool, all of the wells would be on the pump at present. Even if the pool had been developed under the customary proration curtailment, but with the pressure maintenance program not carried out, it is estimated that possibly 75 percent of the production would be by pumping methods at present. In other words, under any other program of operation, the results would have been an inefficient use of the reservoir energy to the extent that the reservoir pressure would be very materially reduced, resulting in a loss of recovery and also necessitating expensive production methods. Thus, the pressure maintenance program has not only effected a material saving in drilling and operating costs, but will also materially increase the ultimate recovery from the pool.

Summary

The foregoing discussion may be briefly summarized as follows: Gas under pressure in the reservoir is the all-important source of energy in the production of oil. Efficient use of reservoir energy results in the highest ultimate recovery, and inefficient use, or waste, of the reservoir energy results in a loss in recoverable oil. At the high pressure existing in oil reservoirs, gas, if present, is dissolved in the oil, materially reducing the viscosity and surface tension. A reduction in viscosity and surface tension renders the oil more readily recoverable. The gas is retained in solution by maintaining the reservoir pressure, which result can be accomplished by utilization of the natural water drive, if one exists, or by returning to the producing formation sufficient gas or water to compensate for the fluids which

THE MAGIC OF

Black Mirrors and Bright Lights

●No human eye has ever seen the stresses which pressure sets up in valves. No human eye has ever observed the action of such stresses—until their physical effects became visible.

But Crane—in its unending search for valve perfection—is not content to work out stresses by mathematical formulae. With the magic of black mirrors and polarized light, stress patterns reveal themselves as "shadows" in transparent model sections of valves. And so Crane "sees" the unseeable, that Crane valves may prove superior to every condition of service.

Since 1890, Crane has been continually making exhaustive tests on metals and alloys. Pioneering in metallurgical research has shown Crane what combinations of metal and design will do your job better. That is why standard Crane valves are so often the right answer to what seems to be "new" valve problems.

Look in your new Crane No. 52 and other catalogs for the details of over 38,000 items and dimensions tested in the laboratory and proved on the job. Use them when you need valves, fittings, pipe or accessories. CranEquip for satisfaction.

CRANE

CRANE CO., GENERAL OFFICES: 836 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS

Branches and Sales Offices in One Hundred and Sixty Cities

VALVES, FITTINGS, FABRICATED PIPE, PUMPS, PLUMBING AND HEATING MATERIAL

plied in the next few days.

FIND "TOMORROW" AT CRANE PLANT

CHICAGO, Ill., Oct. 28—For over eighty years oil and gas engineers have been finding their "tomorrow" needs at the Crane plant. They are still doing so. The organization which was first to create a staff to study the effects of higher temperatures and higher pressures on valve and fitting materials continues to function in the land of tomorrow.

It is never safe to set a limit to the demands of the oil and gas industry. As soon as new limits have been reached in regular practice, someone raises the ante. This is one reason why a big battery of "creep-test" machines continuously torture metals and alloys in the Crane Research Laboratories and men measure results in half-millionths of an inch.

The regular Crane line of valves and fittings, tested in the laboratory and proved in the field, will handle the majority of your problems. You will find the details in your Crane No. 52 or other catalogs. If what you are seeking for tomorrow is not found there, tell us what you want. It is likely that you will find "tomorrow" at the plant.

are withdrawn. The rate of reservoir pressure decline can be materially arrested by returning gas or water to the formation, by proper control of the rate of production, and by proper well spacing.

Principles Not New

These principles are not new to the petroleum industry or the petroleum engineer, neither are they pure theory, nor speculation. They have been known and understood for many years and have been tried and proven. One might naturally ask: Why, then, are they not more generally followed and applied? The answer is that too frequently it is not possible, due to the selfishness and shortsightedness of the many operators and royalty owners who are usually involved.

Must Be Considered as Unit

Efficient operation can only be achieved where the pool as a whole, not the individual well, is considered as a unit. This can be accomplished only where the pool is owned by a single operator, by cooperative agreement among the several owners, or by unitization of the properties involved. Where the pool is not singly owned, unitization seems to be the most satisfactory solution.

Unitization

Unitization has been defined[12] as the "practice of unitizing the ownership and control of an actual or prospective oil or gas pool by the issuance or assignment of units or undivided interests in the entire area with provisions for development and operation by an agent, trustee, or committee representing all holders of undivided interests therein." Unitization may consist of leasehold interests only, or may include royalty interests as well. The most satisfactory unit is one which includes both leasehold interests and royalty interests and covers the entire producing area. Where this is the case, all problems relating to drainage from one tract to another within the pool, proper well spacing, producing rates of individual wells, etc., are obviated, and the pool can be operated with the highest degree of efficiency for the pool as a whole. To accomplish this end, it is very essential that the royalty owners also join in the unitization agreement. Unitization agreements are very difficult to consummate, due largely to the fact that so often the people involved do not appreciate the advantages to be gained and are not far-sighted enough to overlook a small apparent loss in order to gain the greater ultimate goal. This is particularly true of the royalty owners where such ownership is divided. In the case of government lands, the Department of Interior has in recent years compelled the unitization of lands under their supervision, such requirement being contained in the lease.

The Legal Angle

Turning to the second phase of this paper, in which I shall attempt to correlate the engineering principles which I have discussed with the law of oil and gas, I naturally enter upon this task with diffidence because I am a petroleum engineer and not a lawyer. First of all, I wish to say that I shall narrow my discussion in this particular, namely: It shall be my purpose to relate the engineering principles I have dwelt upon with the conservation statutes of the several states. Whatever application of my engineering studies and experience I shall give to constitutional questions requires that I use the legal opinion of oil lawyers as it may be found in numerous treatises and as it has been expressed to me personally. I have drawn upon legal opinion for the following propositions, and as I indicate the several basic propositions that I shall here state, I shall endeavor to show how the particular constitutional question is supported by the engineering principles I have sought to elucidate:

Police Power

1. The widest field for the operation of the police power of a state is where the property rights of several proprietors are so interdependent that what one does may, in a substantial degree, prejudicially affect the property rights of his neighbor or neighbors. I am further told that the constitutional test of a property adjustment of this kind depends upon the reasonableness thereof. If this constitutional principle holds, the application of my engineering thought is direct and immediate. While the technical part of this paper goes into many details, the following general conclusion may be drawn therefrom: (a) Reservoir energy, particularly gas energy, possesses the attribute of mobility. (b) It is the principal force which oil operators must depend upon to move their oil through the sand to the bore hole and, if the pressure is sufficient, to the surface. (c) I am told that one appellate court, specifically, and many others, by necessary inference, have held that the reservoir energy is the common property of all the operators in an oil pool. (d) I have demonstrated that the conservation of the reservoir energy to the highest point of efficiency in the oil pools of the country is the all-controlling circumstance upon which we must depend to enlarge the recovery of oil from our oil pools. (e) These self-evident facts lead to an inevitable conclusion; namely, that if one or seevral oil operators in an oil pool shall waste, or even inefficiently use, the reservoir energy of the pool, while the disposition of their neighbors in the pool is to the contrary, a police statute conserving the reservoir energy for the benefit of all of the operators in the pool, so that each shall have his share of that energy for oil producing purposes, is constitutional.

Basis for Enforcement

2. I am told that since oil and gas are irreplaceable and exhaustible natural resources, the courts have found a basis for an exercise of the police powers to conserve reservoir energy for large ultimate recovery under that part of the police power which supports legislation to promote the general welfare and general prosperity. If the constitutional proposition here asserted is sound, we have another source of police power to look to, to conserve reservoir energy for larger ultimate recovery.

Legislation Enacted and Due

3. Numerous oil producing states have enacted conservation statutes, differing in form and the degree of regulation imposed. The states that have so acted are Texas, New Mexico, Louisiana, Oklahoma and Kansas; and a comprehensive measure of this sort passed one house of the Michigan Legislature at its recent session. Doubtless other states coming into oil production will be obliged to consider legislation of this type. While it is true that the enactments of the several oil states in respect of conservation differ in form and, in many respects, in principle, there is clear statutory purpose underlying most, if not all, of them.

In brief, the design of these

No Other V-Belt compares with Dayton for

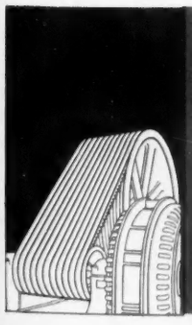
Undaunted Toughness

No rhinoceros ever boasted a hide to match the toughness of the Dayton Cog-Belt. The rubber compounds in Daytons are the toughest materials used in belt making, and the fabrics are the strongest. That's why Daytons have the stamina to stand up on the most grueling jobs.

In mines and quarries, in lime and cement mills, in the oil fields ... wherever belts are exposed to dust and grit, dampness and drought ... Dayton Cog-Belt Drives by the tens of thousands are surpassing all others in ruggedness and long life.

If you want sturdy, dependable, economical power transmission ... smooth, silent, shockless power transmission ... install Dayton Cog-Belts. Write us for catalogs and data, or call your local Dayton distributor.

THE DAYTON RUBBER MFG. CO.
DAYTON, OHIO



Dayton

COG-BELT DRIVES

MADE BY THE WORLD'S LARGEST D MANUFACTURER OF V-BELTS

measures generally is to conserve reservoir energy for larger ultimate recovery and to adjust and settle the correlative rights of the operators in an oil pool in so doing.

Every oil lawyer knows that the complexities, uncertainties, and differences in producing conditions, first between pools in the state, secondly between properties in the same pool, and thirdly in respect of wells on the same property, forbid the enactment of a conservation statute specific in every rule of conduct laid down. The statute must lay down the general standard of conduct among oil operators to effect conservation, leaving the necessary power of investigation and administration to an administrative agency.

Aiming at Conservation

I am advised that the following methods leading to the conservation of reservoir energy, and therefore a larger ultimate recovery, may be prescribed under the police powers of the states, the sole ground of attack being the reasonableness of the regulation imposed: (a) The determination of the manner in which wells should be drilled, equipped, and completed to conserve reservoir energy; any regulation under a statute to effect this purpose to be adapted to the peculiarities of the properties and wells involved. (b) The establishment of a maximum gas/oil ratio to conserve energy; this, again, to be adapted to the peculiar producing advantage, certainly of each property, if not of each well. (c) A requirement for gas pressure maintenance to conserve energy; here, again, the peculiarities of each property — perhaps of each well—to be allowed for. (d) Requirements for gas repressuring where maintenance of pressure in the particular pool is no longer practical; here again the factor of the difference between properties, and perhaps between wells, to be taken into account. (e) The limiting of volumetric withdrawal where a gas cap in an oil pool is penetrated, the well producing gas only, or a high gas/oil ratio. This would be within the principle of adjusting the correlative rights of the operators in the way of conserving the reservoir energy for ultimate recovery for the benefit of all. (f) In the case of a water-drive field, the laying down of rules that would control the daily rate of oil production per well so as to insure, to the extent possible, uniform water encroachment which, if accomplished, substantially enlarges ultimate recovery.

The theme of this paper, whether it relates to technical engineering questions or to the conservation laws of the states, is that reservoir energy, of whatever type, must be conserved for larger ultimate recovery; that adjustments among operators in the same pool, to effect that purpose, must be made, and that all of these things may be achieved within constitutional bounds if reasonable in all the circumstances of the particular case.

BIBLIOGRAPHY

[1] C. S. Slichter, "Investigation of the Motion of Ground Waters," U. S. G. S. 19th Annual Report (1899) Pt. II, p. 295-384.

[2] Tickell, Mechem and McCurdy, "Some Studies on the Porosity and Permeability of Rocks," Trans. A.I.M.M.E. Pet. Div., p. 250 (1933).

[3] Ben E. Lindsley, "A Study of 'Bottom-Hole' Samples of East Texas Crude Oil", U.S. B.M. Report of Investigations 3212 (1933).

[4] Wm. N. Lacey, "Practical Benefits of Pressure Maintenance in Petroleum Production. Report from American Petroleum Institute Research Project 37." A.P.I. Prod. Bull. No. 211 (1932).

[5] H. C. Miller, "Function of Natural Gas in the Production of Oil," Report of the U.S.B.M. and A.P.I. American Petroleum Institute Press, New York (1929).

[6] P. D. Torrey, "The Water Flooding of Oil Sands," Pet. Eng. Handbook, 142-156, 2nd. Edition (1931), Palmer Pub. Co., Los Angeles.

[7] K. B. Nowles "Mechanics of Water Movement in Natural and Artificial Flooding of Oil Sands," Trans. A.I.M.M.E., Vol. 103, p. 192 (1933).

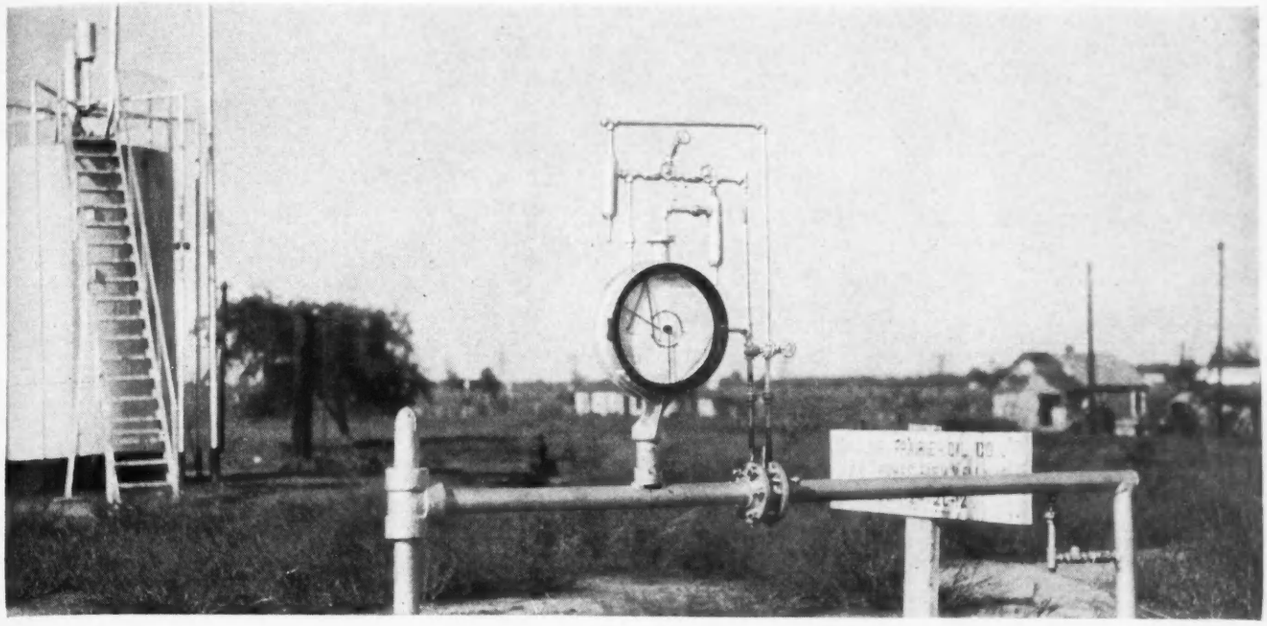
[8] P. D. Torrey "Modern Practice in Water Flooding of Oil Sands in the Bradford and Allegany Feilds," Trans. A.I.M.M.E., Vol. 86, p. 272 (1930).

[9] Fancher and Barnes, "Water Flooding in the Mid-Continent," Trans. A.I.M.M.E., Vol. 118, p. 138 (1936).

[10] T. V. Moore, "Application of the Principle of Volumetric Withdrawal to the Allocation of Production," A.P.I. Prod. Bull. No. 212 (1934).

[11] Salnikoy and Haider, "Pressure Maintenance and Unitization, South Burbank Pool," Mid-year Meeting A.P.I., Colorado Springs, Colo., June, 1937.

[12] Handbook on Unitization of Oil Pools, Mid-Continent Oil & Gas Association, (1930), Tulsa, Oklahoma.



Input manifold and meter installation on gas repressuring project of Sinclair-Prairie Oil Company in Tulsa County, Oklahoma. Gas is being injected into the Bartlesville sand at depths ranging from 1080 to 1160 feet. Some locations cut as high as 60 feet of saturation. Meter and input manifold consist of a half-inch injection control, a manifold plug valve shut-off (not shown) on a riser, orifice meter flanges and meter. Manifold used in connection with meter has two sediment and fluid bulbs, one on the high pressure and one on the low pressure side.

Stripper Wells

GAINING SECOND WIND THROUGH

Reconditioning

By FRANK B. TAYLOR, Staff Writer

THE last year has witnessed a very noticeable increase in reconditioning of old shallow stripper properties in the northern Mid-Continent. In most cases the work included running new tubing, removing and replacing bad casing, renewing or modernizing powers, and cleaning holes.

Paralleling the reconditioning of old wells, new shallow drilling is widespread, and has accounted for the discovery of some new pools, among which are the Tulsa Airport and the Dille pool on the Verdigris, with other strikes of promising importance.

Definite increase in reconditioning activity is a natural combination of circumstances. Those holding shallow acreage, either productive or scheduled for development, have not felt until recently that it was practical to spend much money in order to maintain shallow properties. The increase in the per barrel price of crude over two years ago is a factor in the shallow recovery, but in itself is relatively unimportant. This fact is due chiefly to increased labor costs, and to higher taxes indirectly placed.

Secondary Recovery Important

A factor of importance in the trend is the interest in secondary recovery; water-flood drives, and repressuring. The advent of these into the Mid-Continent concentrated interest of shallow operators, with the result that many abandoned properties were reconditioned in the hope that they would be found suitable for flood projects.

The last factor in the combination of circumstances

Cleanout operation on shallow production of Sinclair-Prairie Oil Company. The hole into the Bartlesville sand was deepened about 10 feet and shot. Cleaning is being done with portable equipment, caving being picked up with the bailer. Agitation with the tools aids in getting a clean hole. Driller Sam LeBaron and J. E. Rollins are on tower.

is the encouraging results obtained by improved clean-out methods. New means are employed to bring back depleted production, and in some cases the production increases are distinctly justifiable. Advances in acid treating and adaption of shooting to more exactly fulfill the requirements of the stripper operator are new tools for the producer.

Practically all the power units being used for clean-out work are portable. Auto engines have come into wide use, these being operated either by gas or gasoline. A few rigs are using boilers in clean-out work.

Clean-Out Contractors

Although much of the present reconditioning is being done by those holding the production, a number of concerns are specializing in this type of work and bidding on jobs. Some of these firms have been practically idle for the past few years, while many are new enterprises. They use their own equipment and employ their own men almost exclusively, and are generally available for either the ordinary rod and tubing job, or for the more complete clean-out. There can be no standard or fixed price for a job, as the condition of the hole, depth and thickness of producing strata, and other factors must be considered. In general, wells to 1100 feet can be contracted cleaned out for an adjustable average of $380.00 or less.

Many oil companies having acreage in the shallow sectors have conditioning machines and crews in constant operation. One major operator in Glenn pool, eastern Creek County, Oklahoma, has two strings doing nothing but well servicing. It is seldom that either of the crews is idle. A careful tabulation of the work of these units discloses that the cleaning is accomplished on a cost basis comparable with that of the contracting enterprise. Cleaning jobs in the Glenn sands at below 1580 feet cost approximately $450.00 or more, this figure being non-inclusive of chemical or shot, if used.

In units generally confined to a definite field or area, tractors equipped with winches are frequently preferred to the motor power. Movement is cheaper, and there is less rigging-up.

Shooting Becomes More General

Use of a squib shot to give a new surface to, or thoroughly vent the old surface of, old producing wells is becoming more general. The practice is applicable either to wells that have never been shot, or to wells already producing into a shot-hole. Both cases have been very successfully dealt with. In many cases two shots are given, the first considerably smaller than the last. The basis for this means is the effort to uniformly enlarge the walls by applying two shots, the debris of the first being cleaned from the hole before the second placement. Results apparently justify the practice in many cases.

Size of Shots Used

The size of shots is of vital importance in clean-out work. Variations in the sizes being used are from 5 to 250 quarts. Sand thickness and hardness are governing factors.

In Boyton field of Muskogee County, an operator has been shooting 8 to 10 feet of ordinary, completely saturated sand with five quarts. This load, carefully placed with fluid load, increased a normal average production of from three to four barrels per day to about 15 barrels per day. Due to the slight amount of nitro used in the job, the per quart cost was high, the total being about $60; but the additional production amply justified the expense.

Reliance Oil Company of Oklahoma, operating in Glenn pool, shot three wells with 230, 240 and 250 quarts of nitro in sand varying from 80 to 120 feet. Shots used in the Wilcox sand zone of the Seminole pool for increasing the production of old wells sometimes exceed this high average. On the other

IDECO

Portable DRILLING
• RIGS •

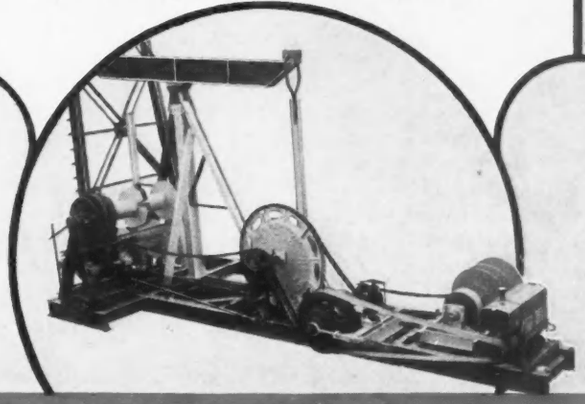
PROVED BY USE ON
HUNDREDS OF LOCATIONS.

Save $1000 to $2000 per well

COMPLETE SELF-CONTAINED MACHINES
for
Combination Rotary & Cable Tool Drilling,
Heavy Straight Cable Tool Drilling,
Drilling-in Service . . Clean-out Service,
Potential Pumping Service

MAY BE POWERED WITH
Steam Engine, Multi-cylinder Gas Engine,
Slow Speed Oil Country Gas Engine,
Diesel Engine, Electric Motor

Write for detailed specifications, operating data, and prices.



THE INTERNATIONAL DERRICK & EQUIPMENT CO.
DIVISION OF INTERNATIONAL - STACEY CORPORATION
Beaumont, Texas - Columbus, Ohio - Los Angeles, Cal.

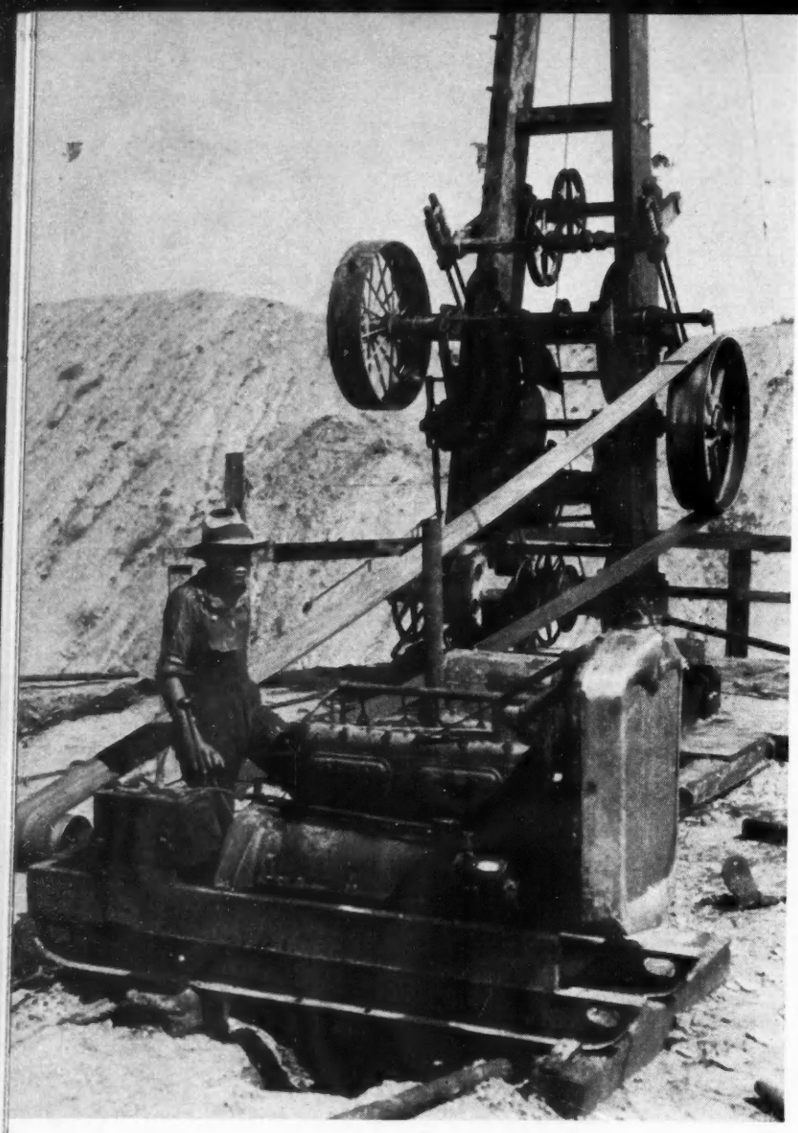
DIVISION SALES OFFICES

NEW YORK	CORPUS CHRISTI	TULSA
DALLAS	BUENOS AIRES	WICHITA
ODESSA	OKLAHOMA CITY	PAMPA
HOUSTON	KILGORE	SHREVEPORT
FT. WORTH	SEMINOLE	RUSSELL

PLANTS
COLUMBUS, OHIO
DELAWARE, OHIO
MARIETTA, OHIO
BEAUMONT, TEXAS
TORRANCE, CALIF.

Branches in All Active Fields

There is no substitute for Oil Country Experience in Building Oil Country Equipment



In the shallow sector of northeast Oklahoma. The original well was completed in Bartlesville sand below 1,100 feet, in the east Flatrock area. After standing idle for years, a shot loosened the sand walls of the hole, and the well was cleaned with the bailer. Power is delivered the rig by belt from a 6-cylinder, gas-gasoline fueled, water-cooled auto motor mounted on skids.

hand, within the same area, shooting the Cromwell sand has been found to be not so successful.

Generally speaking, old wells into the Bartlesville sand can be shot with about one quart or less per foot for loose, but not caving, sand and two or two and a fraction quarts per foot of hard sand. Kansas wells producing from Peru and Squirrel sands have responded well to shots of 15 quarts or less for thickness of pays to 30 feet. In some instances the Squirrel is much thicker than this, is relatively hard, as in the vicinity of Garnett, and consequently requires a heavier shot.

Action of Shot Is Double

The action of the shot in cleaning out is double. First, it presents a new production face to the hole, either partially or completely. Second, it opens or cleans out ducts through which crude can flow.

In old wells already having a shot hole it is often only necessary to enlarge the exposed surface of the sand. Following this, the well is cleaned out with customary equipment. A dart bailer is generally used, the complete operation requiring anywhere from three to 10 days. Even if it is possible to clean all loose sand from the hole by bailing, it is often desirable to run in the tools and to agitate the fluid. This brings about some additional cleaning of cavings promoted by the bit. In addition, the ends of ducts may be further cleaned by this flushing action. Heavy shots in caving formation may result in large volumes of sand falling into the hole, the sand continuing coming in as the bailing progresses.

Shooting Deepened Wells

In many of the areas under reconditioning the work includes drilling into deeper sands. In such cases it is best to treat the well as a new hole. Shots should be single and in proportion to the sand.

The desirability of single heavy charges in the case of new holes over a number of small or bumper charges has been established fairly well. An instance in point is the redrilling being done in Glenn pool. Beneath a shale break of some 15 to 18 feet near the bottom of the Glenn sand, another section has been developed partially. New holes into the lower zone are receiving the treatment of new wells and are being shot with from 90 to 100 quarts under a pea gravel tamp. New wells that have four offsets that have been producing for as long as 10 years have been completed for 10 or more barrels after a shot.

Effect of Scale

Success in rejuvenation of old producers by treating with chemical compounds depends chiefly upon the condition of the sand face. A number of independent agents may account for decreased production in excess of the normal depletion of a reservoir. These may be present singly or in a compounded form.

Much crude is retarded in entering the bottom of a hole through the deposition of scale and paraffin adhering to the face of the producing horizon. The paraffin is formed through a change in temperature and pressure and gas release. Scale is largely chemical in composition and consists generally of carbonates and sulphate, both of which are practically insoluble under ordinary conditions. Segments of this type of scale picked up during bailing show that it may be anywhere from zero to one-half inch thick, but the formation is usually uniform within individual wells. The matter is impervious over most of its body.

This material is frequently found in shallow producers of low pressure especially those which make water. At times the formation of the scale extends many feet up the hole or into the casing. In such amounts it not only seriously retards the natural flow of crude, but also reduces the efficiency of the pumping equipment.

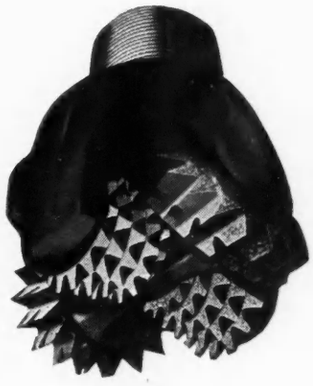
In addition to the natural accumulation of the scale, it is frequent that the material breaks off the walls and builds up in the bottom of the hole. As the hole continues being filled with scale, the tubing level must be raised constantly, and a stage is finally reached where the tubing is higher than the fluid level. Such cases are not uncommon in areas of low pressures.

Chemical Treatment

In Sperry pool, operators determined that much of the failing production was due to scale formation. Numerous treatments were made, with production

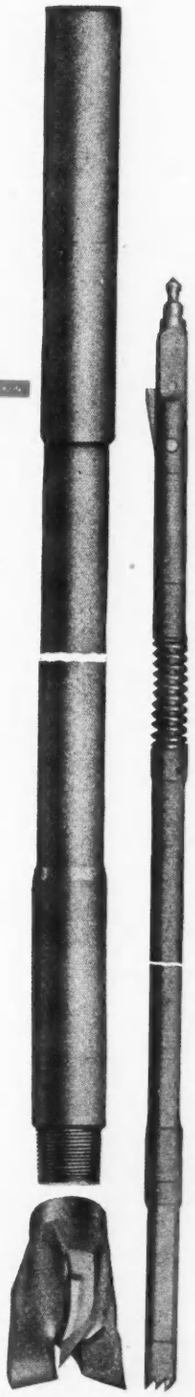
COMPLIMENTS *the* A·P·I·

REED
TOOL JOINTS

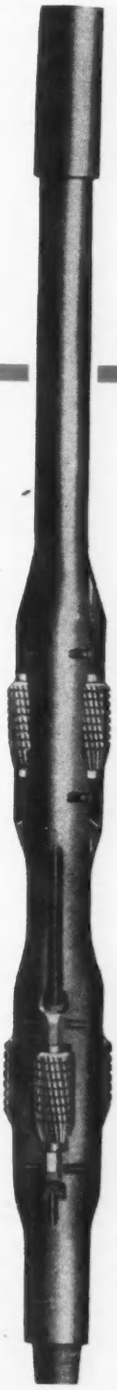


REED DK
ROLLER BITS

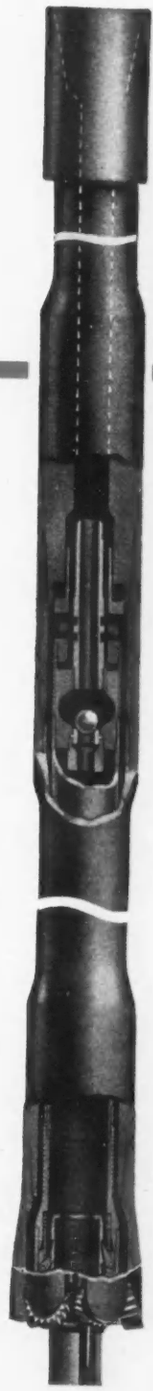
REED
W-I-B BITS



REED
B-R WIRE LINE DRILLING
CORING BITS



REED
REAMERS



REED
KOR-KING
CORE DRILLS

REED
DRILL COLLARS

REED ROLLER BIT COMPANY

prior to treating averaging about one-fourth to one barrel of crude per day. By the use of gyp solvent the scale was effectively reduced and the production increased to about five barrels.

In many sections of the country, but prevalent mostly where highly diluted brines are contaminated with other chemicals, wall scale may be a mixture of paraffin and carbonates. In such cases it is seldom possible to treat the paraffin effectively. But by treating the carbonate, the solidity of the mass is reduced and it may be removed from the hole by bailing. A similar reaction to treatment is possible when comparatively insoluble sulphates are formed with soluble carbonates. Treatment reduces the carbonates, removing the binding material supporting the body of scale, and although the sulphate radical may only be affected very slightly chemically, it can be reduced so that it can be readily removed.

Asphaltic Compounds and Paraffin

Asphaltic compounds and paraffins are frequently a source of difficulty in shallow wells, and are often of sufficient solidity to block off production. Paraffin solvents have been applied successfully in a number of instances. The treatments are more likely to be effective if the ratio of paraffn to asphaltic residuum is high. In practice the solvent is generally cut or mixed with naphtha, then introduced into the well.

These methods of reconditioning shallow wells by chemically removing or reducing scale formations are gaining in application. Most operators are doing the treatment themselves with their own equipment. Specific treatments are available commercially in most areas, and operators elsewhere are mixing their own. The degree of success being obtained varies with the particular conditions encountered, these conditions being difficult of analysis in many cases. Costs of the operation vary from $3 to $50 for the ordinary small producer. Use of the treatment may be noticeable for as long as eight or 10 months, depending on local conditions.

Use of Acids

Some large independents in shallow areas are mixing special treatments that have proven unusually successful. One means first employed in California for the cleaning of screens and walls in the Mid-Continent is frequently referred to as the California treatment. The mix used consists of about 100 pounds of soda ash and 10 pounds of caustic, mixed with approximately six cubic feet of water. This charge is introduced into the well and repeated until the shot hole is filled. Lowered into each charge are 7½ gallons of 66 Baume sulphuric acid. In addition to the chemical solvent reaction resulting, heat is generated which accelerates dissolution of paraffin.

Some operators use muriatic acid (HCl) in place of the sulphuric (H_2SO_4), the reaction being substantially the same. However, in place of the sulphate formed when sulphuric acid is used, a chloride is formed with the use of muriatic acid, and chlorides are commonly more soluble than the sulphates.

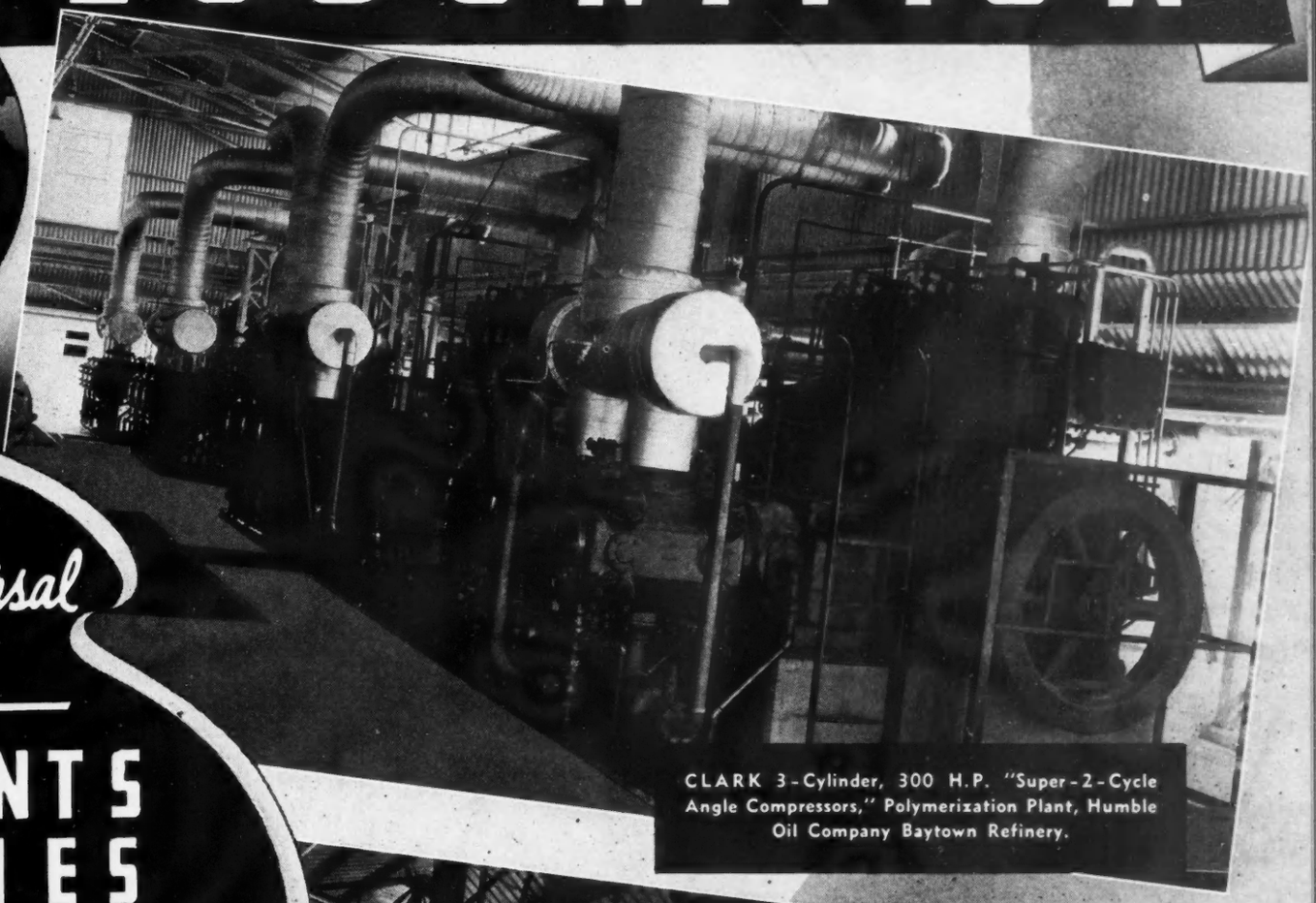
Gas wells in the area are being treated to stimulate gas production. Lime zones are being reacidized, shots are bringing back production in many instances, and some gas that has been killed through flooding with water have been given new vigor by pumping water off the formation. In such cases it is also possible under customary conditions to blow or jet the water from the hole. Half-inch tubing run through regular tubing makes a good gas-water jet for shallow producers. The water is produced through the half-inch when necessary to lower the fluid in the hole.

In many Kansas areas as well as those in northeast Oklahoma, operators are using wall scrapers to reduce scale.

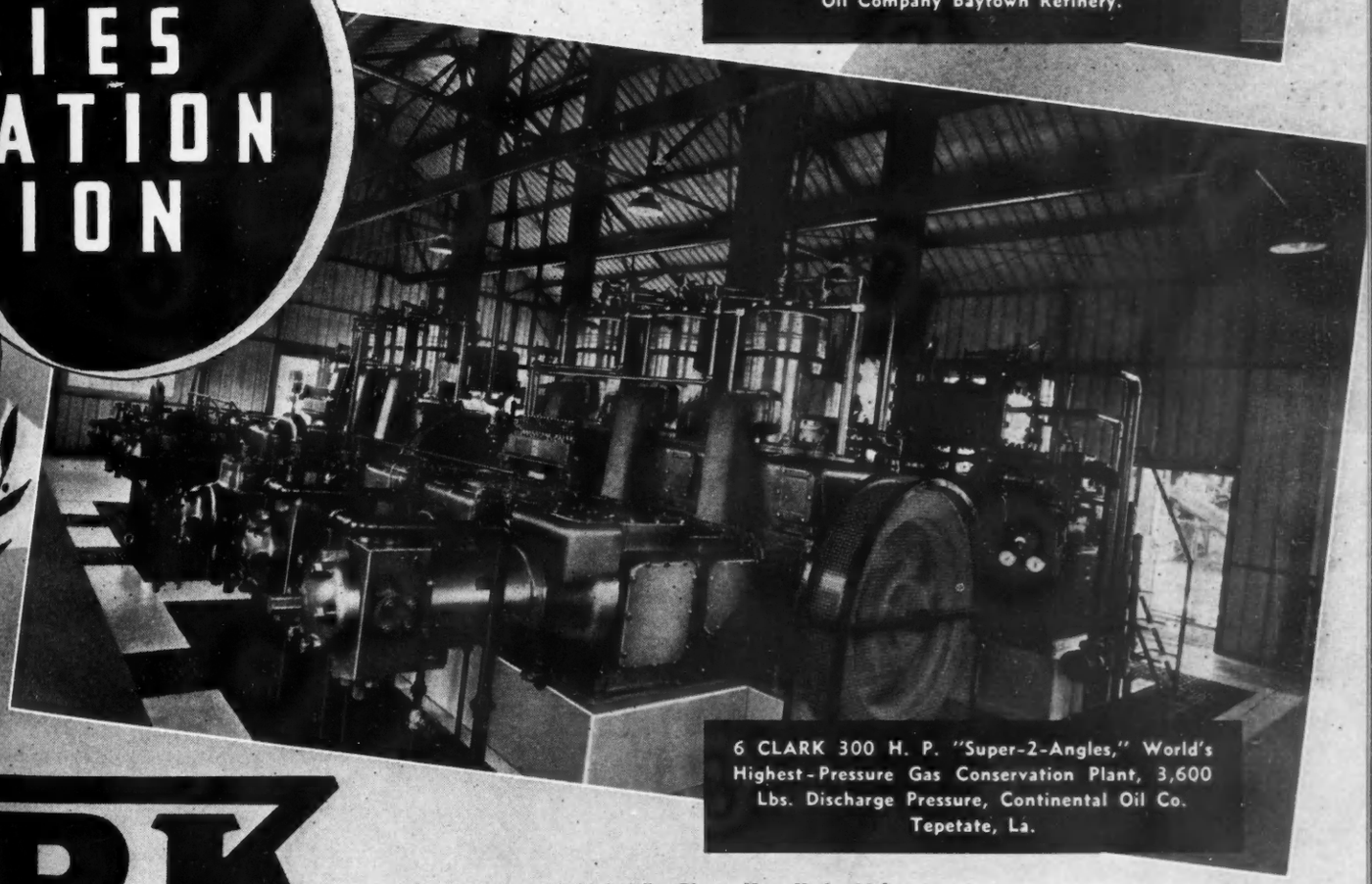
Powered pumping units as installed on Sinclair-Prairie Oil Company's natural gas repressuring project in the shallow Bartlesville sand sector of Tulsa County, Oklahoma. Most of the crude is produced from about 1,150 feet. Production may be by continuous operation of the lifting units, or in lesser time, depending upon the added volume through the application of repressuring means. J. "Joe" W. Kisling, pumper, with 16 years experience with the concern, watches over operations on the lease. He notes a vast improvement in both equipment and methods over the rigs and pumpers used when he first became a part of the oil game.

RECOGNITION

niversal
for
PLANTS
ERIES
IZATION
CTION



CLARK 3-Cylinder, 300 H.P. "Super-2-Cycle Angle Compressors," Polymerization Plant, Humble Oil Company Baytown Refinery.



6 CLARK 300 H. P. "Super-2-Angles," World's Highest-Pressure Gas Conservation Plant, 3,600 Lbs. Discharge Pressure, Continental Oil Co. Tepetate, La.

RK

Export Office: 30 Rockefeller Plaza, New York. Mid-continent Sales Offices and Warehouses: Tulsa, Okla., and Houston, Texas. West Coast Office: Smith-Booth-Usher, 2001 Santa Fe Ave., Los Angeles. Foreign Offices: 72 Turnmill St., E. C. 1, London, England; 4 Str. General Poetas, Bucharest, Roumania.

"Dressed-Up" Rig Pays On the Drilling Job

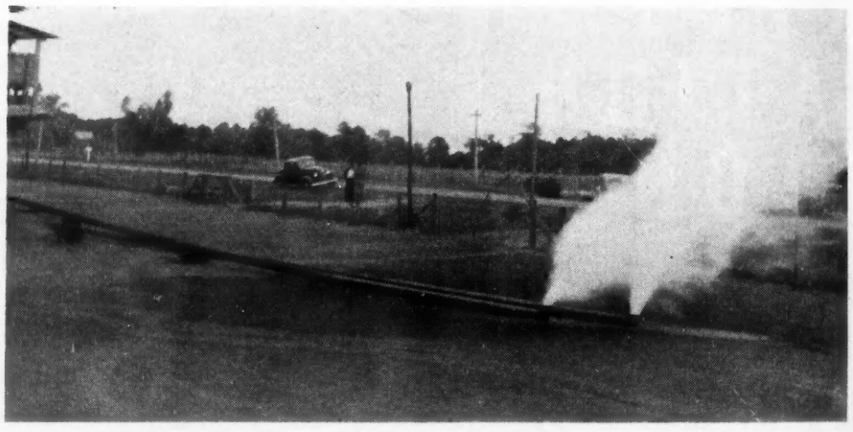
By M. T. PATE

GEORGE B. BARHAM'S Whitfield 1, being drilled in the R. Bennington Survey, 3 miles north of Jefferson, Texas, on the Texarkana highway, has earned for itself the reputation of being the neatest, most carefully kept up of any rig within the travels of scouts and other oil men traversing that district.

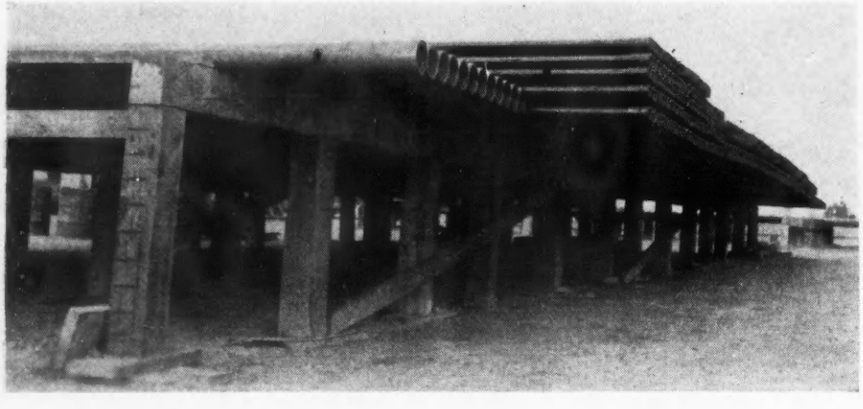
And, quite unlike the posed and frequently impracticable arrangement of tools and equipment on the one day when the "higher-ups" came out from the home office on their annual inspection, this painstaking care to maintain the entire drilling operation in a condition meriting such an inspection pays constant dividends in better work, less lost time in drilling as also in coming out of the hole, greatly reduced liability of accident, and appreciably lengthened service life of all equipment.

Now on its tenth set-up within the span of a year, all equipment has the appearance of having just been brought from the supply house, and the engine and draw works run as quietly as though on show at an exposition.

The three 125-horsepower, gas-fired boilers, with their short Venturi-type stacks, are located adjacent to their feed water source, and far enough away to insure thorough dilution of the stack gases before they can reach the derrick to



Right: Exhaust lines extend far from derrick and equipment, aiding in maintaining better visibility at the rig and cutting down the possibility of corrosion.



Left: As neatly racked as though for sale, this lot of 5½-inch casing and 2½-inch tubing, 6200 feet of each, is ready for running and may be quickly and accurately scaled.

Quality, Value, Service. These stated policies on the Thermoid seal have been carefully followed for over half a century. Throughout, Thermoid engineers have conscientiously kept abreast of the many industries Thermoid serves. *Quality* has been almost solely responsible for the consistently superior performance of Thermoid Products and the growth of the Thermoid organization over this long period is best evidence of the *Value* which it has always been Thermoid's policy to provide.

From the standpoint of *Service*, the Thermoid seal is linked with the familiar seal of another organization whose record of performance is outstanding throughout the industry . . . The Oil Well Supply Company.

The Oil Well Supply man in your territory has complete information about all of the Thermoid Oil Field Products listed here.

ROTARY HOSE • AIR, STEAM, WELDING, REFINERY HOSE • PACKINGS • PUMPING AND DRILLING BELTS • BRAKE LININGS MULTIPLE V BELTS AND BRAKE BLOCKS

Thermoid

PRODUCTS FOR THE OIL INDUSTRY

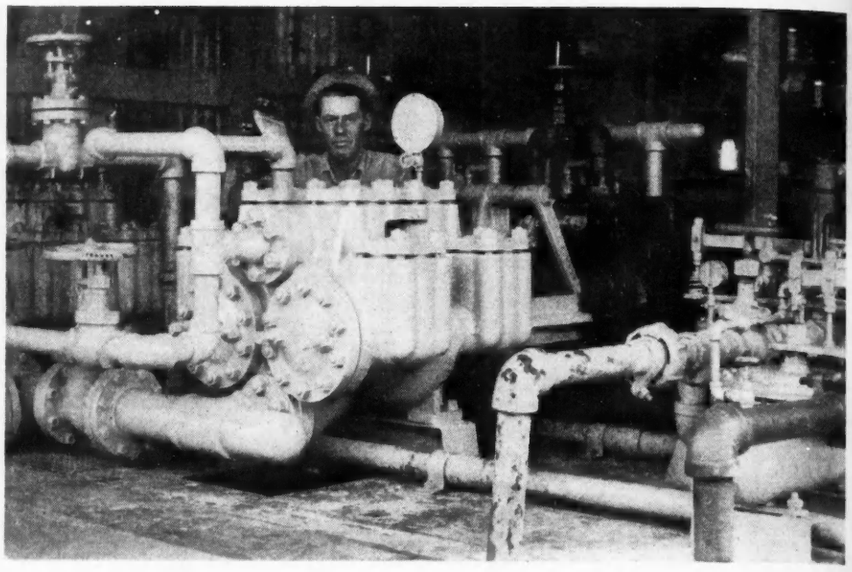
DISTRIBUTED IN ALL OIL FIELDS BY

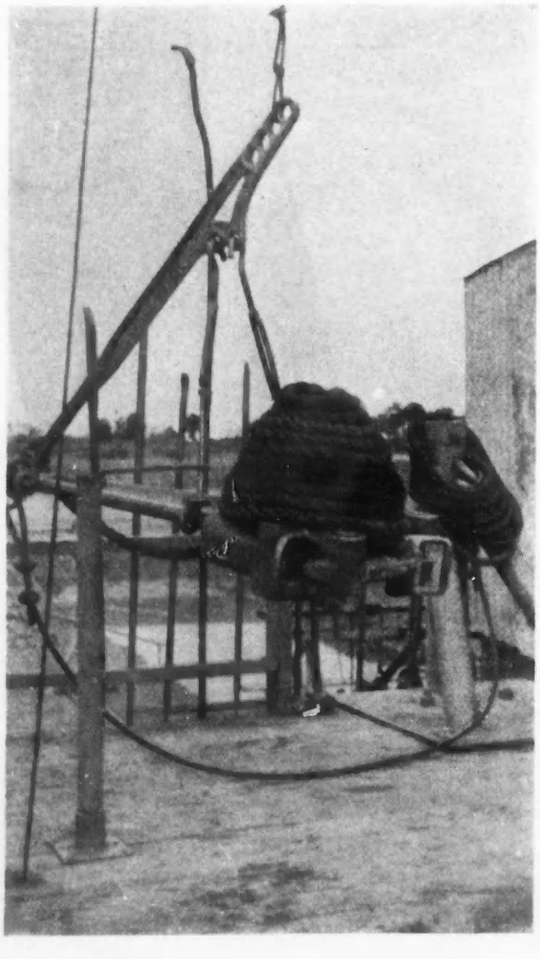
OIL WELL SUPPLY COMPANY

constitute a hazard to working or a possible source of corrosive action. Gas for the boilers is controlled by a dual system or regulators so that any stoppage of feed water supply automatically acts to cut off the gas, while increased steam demand as promptly actuates a valve admitting more fuel. By using ¾-inch by-passes around the 2-inch main gates in the feed-water lines to the individual boilers, it is possible to close the large gates entirely after after a run is started, and to throw wide open the smaller valves on the by-passes. Then, having established a rate of feed-water flow which is uniform, slight variations in the steaming rates of the three boilers, due to wind, weather or setting influences, can be compensated for by varying slightly the adjustment on the fuel valve to each set of burners.

Dual 10 x 5 x 10 boiler feed water pumps are provided, either being ample to care for the three boilers under maximum steam demand. Manifolded suction and discharge lines provide for quick switch-over if desired, or for using both units in tandem for additional water service, all under a normal working pressure of 320 pounds p.s.i.

The derrick floor is well equipped with tool racks, out-of-the-way yet handy devices for holding tongs, lines, and other accessories, while tong counterweights instead of being carried overhead in the derrick are on extended lines and operate within the clearance afforded by the substructure. Instead of being made level, as is customary, the doubled section of the floor whereon is racked the drill stem is made with sufficient pitch to insure prompt drainage and thus aid in keeping the floor clean. Short pieces of inch rope are nailed at intervals across this sloping section of the floor to afford better footing to men working there.





Above: That the job wasn't posed for this story is proved by this snapshot, where the fireman is caught in the act of renewing the paint on his feed-water pumps.

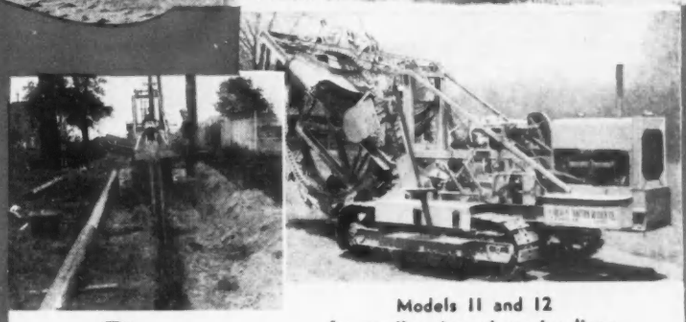
Left: Not posed, but the normal position of the tongs and the line used with them, between periods of use.

Even to the casual tourist the unusually well kept appearance of the yard is noticeable, while the average production man's first thought is that this must be a deepening job on a lease which has already made production and has been under the care of an ambitious switcher. Cars are not allowed to drive at random across the site, nor are scouts and other semi-official visitors permitted to mar the smooth surface of the well-raked yard with random footprints without being assessed a fine or other penalty. The well-kept yard serves to reduce the dust nuisance to a minimum, thus adding much to equipment life, and there is much less chance for tools or other equipment to be dropped where last used, as is so often the case where weeds and brush are allowed to persist.

Even the tubing and casing is ranged as carefully on its racks as though displayed for sale. Besides making for a much quicker and more accurate count of the material thus stored, the plan of lining ends in this manner makes the measurement of random

· MODEL 49 ·
THE PIPELINER
FOR ALL LARGE
MAIN LINE TRENCHES

Buckeye DITCHERS and EXCAVATORS



Models 11 and 12
for small main and service lines.

Save you money ON ANY TYPE-SIZE OR LENGTH OF ditching job.

New Modern models for every trench requirement, give you the last word in engineering for speed, accuracy, reliability and final economy.

As originators of the wheel type ditchers and builder of the equipment used on the most important pipe lines the world over, we offer you the experience of a third of a century in pipe line excavation equipment — the kind of experience that results in profits to you.

Buckeye ditchers have dug the trench for more miles of pipe line than all other makes of ditchers in the world — and today, more Buckeye Ditchers are in operation than any other ditchers built.

Buckeye has the answer to every ditching problem. It will pay you to consult our engineers before you start any ditching project, large or small.

THE BUCKEYE TRACTION DITCHER COMPANY
• FINDLAY, OHIO •

Buckeye Clipper
with METERED VACUUM CONTROL

"Give an Operator a Machine He Likes and He Will Give You Yardage That Pays."

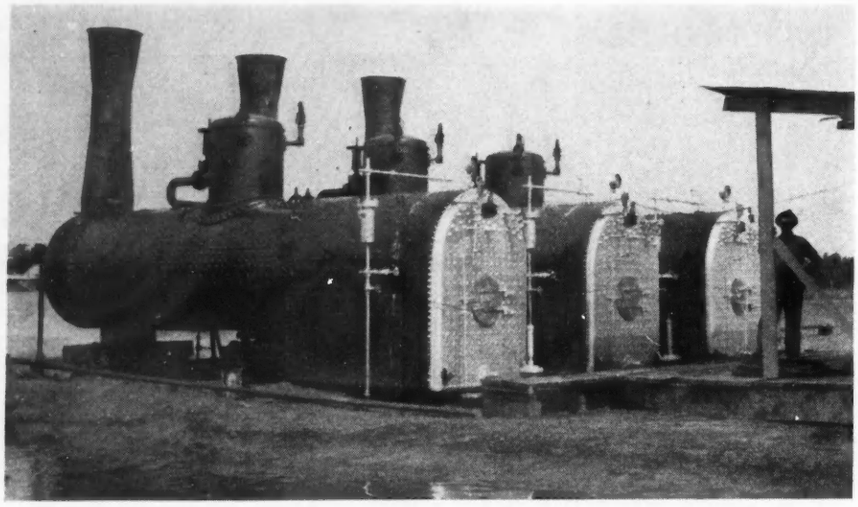
Here's a machine that piles up big yardage without calling for marathon endurance from the operator.

METERED VACUUM CONTROL speeds up digging by making every swing of the dipper fast and accurate. Fingertip pressure by the operator commands instant response from the machine.

Convertible
SHOVELS—CRANES—TRENCH HOES—CLAMSHELLS—DRAGLINES

The Buckeye Clipper Convertible Excavator is Buckeye's newest answer to the problem of economical and efficient earth removal.

Builders of Excavating Equipment for over 1/3 of a Century



Above: Not manufacturer's samples, but an actual working battery of boilers in everyday appearance after 25 days on this lease and over a year's service life.

lengths a task in which the possibility of error is halved.

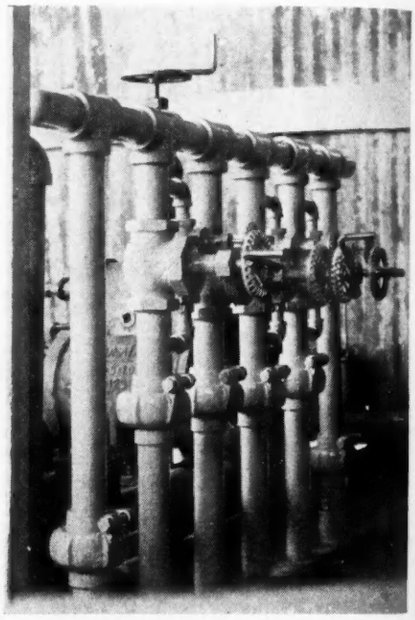
All parts of the equipment are unitized as far as possible, with all conections standardized and thoroughly equipped with unions so that a tear-down or set-up job always proceeds according to a prearranged plan, with a minimum time expenditure and the certainty that the same halves of parted unions will again be matched in the next installation.

Even the lumber serving as framework for the temporary shelters is painted carefully, and when so protected against weathering serves for many moves, practically eliminating the need for any tools save claw bar and hammer for tearing down or erecting on a new site.

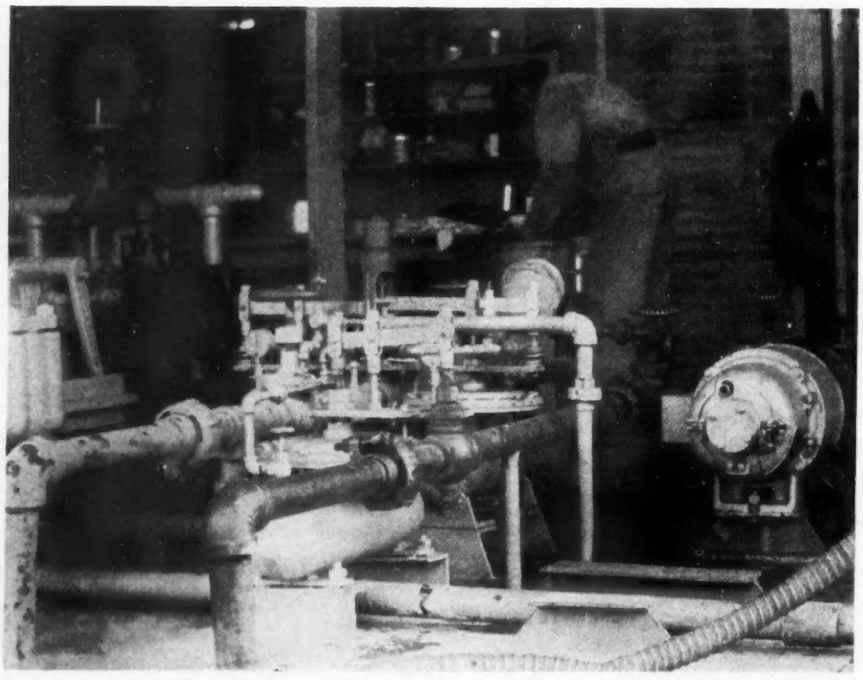
Typical of the extreme care taken with what might be thought unimportant details, is the provision of 1-inch drains for the cylinder cocks on the drilling engine. These lines extend across the floor and carry the condensation beyond the foundation line, where they are carried away in a small ditch and are not permitted to accumulate and render unsightly that portion of the yard. The exhaust from the engines is carried through two 4-inch lines to a point where the steam, as it issues through the two upturned ells, cannot blow back on the derrick and cause annoying condensation, fog the driller's view of the crown block and everything below it, or add to the chances of possible corrosion through maintaining a portion of the derrick in a wet condition.

That such attention to details of upkeep pays dividends in longer life of equipment is obvious; that the men in the drilling crews also appreciate the results which are obtained through the extra work which they are called upon to perform in the maintenance of this spotless condition is evidenced by the extremely low rate of manpower turn-over as contrasted to the frequent "hiring and firing" going on at the average drilling site.

The moving spirit behind this "dressed-up" drilling job is Driller Tex Parks, backed by the wholehearted cooperation of his men and the support of George B. Barham and his tool-pusher, J. H. Windell.



Right: Manifold and by-passes providing means for balancing varying steaming rates of boilers to maintain uniform water level.

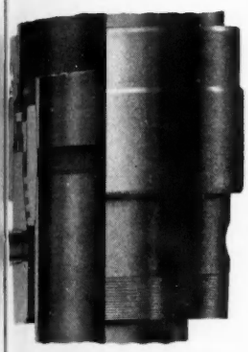


Left: Dual control for gas burned under boilers, arranged for automatic regulation in case of feed water failure or change in steam requirements.

ORDERS ROLL IN

for the most advanced casing head in a decade

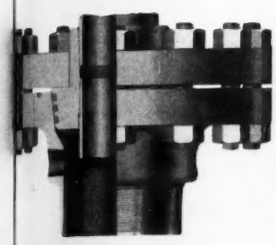
OTHER GULFCO CASING HEADS



GULFCO
Forged Steel Casing Heads
TYPE M

3000 lbs., 6000 lbs. test pressures.

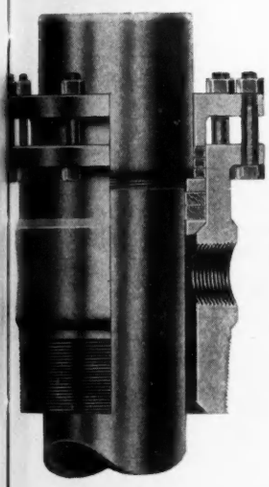
For both low and high pressure wells. Provided with adapter nipple for connecting blowout preventer.



GULFCO
Forged Steel Casing Heads
TYPE M1

3000 lbs., 6000 lbs. test pressures.

Open hole type head with flanged body to be used for drilling through, running casing and tubing. Blowout preventer is bolted down on the flanged body. Can be furnished with groove for steel ring, or hydraulic packing.

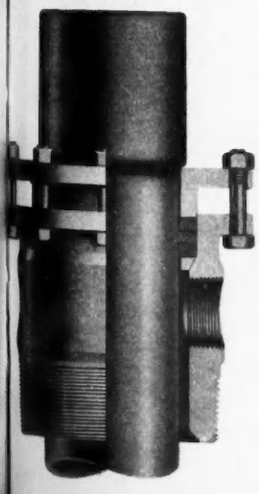


GULFCO
Forged Steel Repackable Casing Heads and Braden Heads
TYPE A

2000 lbs., 4000 lbs., 6000 lbs. test pressures. Male or female threads.

High pressure asbestos packing.

Lower packing acts as seal-off while changing the upper packing.

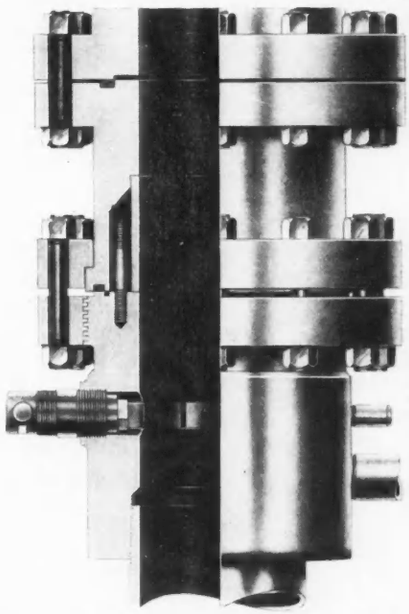


GULFCO
Louisiana Pattern Forged Steel Casing Heads
TYPE B

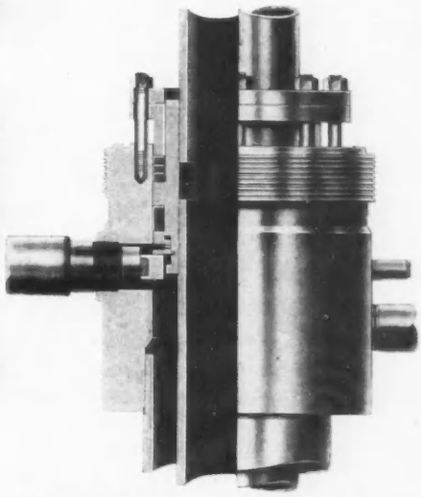
1500 to 3000 lbs., and 3500 to 6000 lbs. test pressures.

Flax or high pressure asbestos packing optional.

The New
GULFCO TRUE FULL-HOLE
Retractable Seat
CASING HEAD
TYPE "J"



View showing head while well is being drilled and also retracted position of dogs of Retractable Seat while casing is being run.



View showing head after well has been completed. Half turn of lever (on outside of head) has advanced seat dogs to supporting position.

6,000 lbs., 10,000 lbs. Test Pressures

FULL OPENING: **Same I.D. as I.D. of casing used, permitting any tool that can be used in the casing to be run through the head without the necessity of making any changes of equipment on the head.**

Permits the setting of casing at any point in the well as the suspension can be raised or lowered through head as desired.

Not necessary to use blowout preventer of larger size, or to rebore to larger size, to take care of suspension.

★ **BY SIMPLY MAKING A HALF TURN OF A SMALL LEVER** the retractable Seat, which normally remains withdrawn into housing in the inner wall of head, is easily advanced to a position for supporting the inner casing. The dogs of seat form practically a solid, uniform supporting ring of enormous strength. **In a test in the presence of engineers of major oil companies, seat withstood a load of 630,000 pounds.**

★ **EASY TO STRETCH CASING AFTER CEMENTING** by simply pulling up until flange coupling is above retracted hanger. Then turn lever on outside of head. This advances the seat so that flange coupling can rest upon it.

★ **SAVES 10 TO 15 HOURS TIME:** Crew does not have to remove blowout preventer before casing can be set. The Gulfco head is on the well at all times, ready for instant use, **a feature that may in an emergency, save the entire investment in the well.**

The Trend of Leading Operators Is to GULFCO FORGED STEEL FOR SAFETY

GULF COAST MACHINE & SUPPLY CO.

18 years manufacturing high grade forged steel oil field equipment

BEAUMONT, TEXAS

GENERAL OFFICE AND SHOP:
305-315 South Mariposa St., P. O. Box 1989—Telephone 326—Beaumont, Texas
HOUSTON SALES OFFICE: 1812 Semmes St., Telephone: Capitol 0817
NEW YORK EXPORT OFFICE: 39 Cortlandt St.
Telephone: Cortlandt 7-6830—Cable Address: "OILIND NEW YORK"

HOW TO TAKE CARE OF

Electric Control Apparatus

By E. H. LAMBERGER*

Seventeenth Article of Series.

CONTROL apparatus as applied in the oil fields may be of standard industrial type or of a somewhat special construction to meet the requirements for operating in areas exposed to the weather, in hazardous areas, or for being transported over fields or rough roads. Manufacturers have recognized the need for apparatus to meet the various operating conditions and suitable equipment is available, and with reasonable preventive maintenance, control apparatus, when properly applied, will give reliable and trouble free service.

The function of control apparatus is to control the application of power to, or the disconnection of power from, one or more motors. The control equipment may vary from a simple snap switch to a very elaborate system of automatic control. Even though the complete equipment may seem complicated, it is made up of elements, which, when considered individually, are usually simple devices. They will give long and reliable service if given reasonable inspection and maintenance to prevent an accumulation of conditions which will result in faulty operation or complete failure.

The purpose of this article is to give some general rules for the maintenance of control equipment, and to list some items of inspection and maintenance for some of the more common pieces of control apparatus used in the oil fields. The information is given from the standpoint of the operator in the field whose job it is to keep the apparatus functioning.

Reasonable inspection and maintenance will prevent an accumulation of conditions that cause faulty operation or complete failure of electric controls.

General Rules

The following rules are applicable to control equipment in general:

1. Keep all connections tight.
2. Keep all parts clean.
3. Keep apparatus dry.
4. Inspect apparatus regularly.
5. Use emergency stop button occasionally for normal stop.
6. Check overload protection apparatus occasionally for free operation and good contacts.
7. Use proper size and type of wire and cable.
8. Protect wire and cable from mechanical injury, and damage from heat, water or oil.
9. Do not work on "hot" equipment unless absolutely necessary —and if absolutely necessary have at least one other person at hand.
10. Have dry and non-metallic under-footing when working on control equipment.
11. Check application of apparatus to assure it is in accordance with the nameplate reading.
12. Installation should be according to recognized safety codes.
13. Follow instructions of manufacturer for operation and maintenance.
14. Capacity of apparatus should be adequate for the motor or circuit being controlled.
15. Keep adequate supply of spare parts.

Space would not permit giving detailed suggestions for maintaining the great variety of control apparatus used in the oil fields. Some items are very commonly used, however, and some definite suggestion for their maintenance and proper operation will be made.

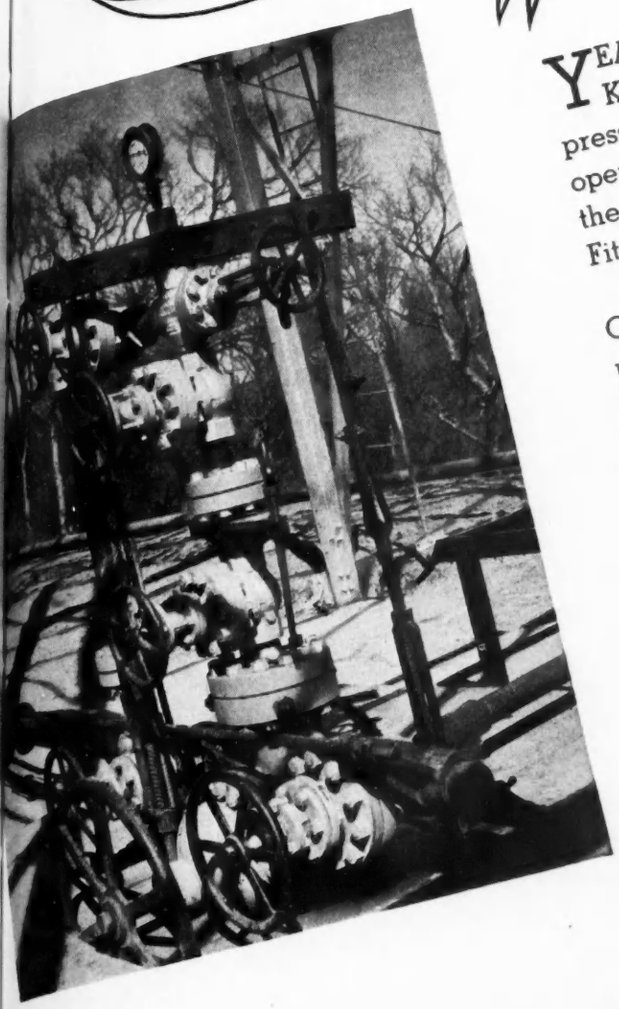
Fused Disconnect Switch

1. Keep terminals tight.
2. See that fuse is held snugly by its clips.
3. Avoid use of oversize fuses

*Petroleum Division, Westinghouse Electric & Manufacturing Company.

KEROTEST

Enjoys the Confidence of Drillers throughout the Petroleum World!



YEARS of successful experience have proved Kerotest Drilling Valves *master* of every high pressure field requirement. That is why so many operators have found it profitable to standardize their entire well control with Kerotest Valves and Fittings.

The steel used in the manufacture of Kerotest Cast Steel Fittings is identically the same as that used in the manufacture of Kerotest 6000 lb. test valves, that is, genuine Manganese Molybdenum Steel, with exactly the same degree of resistance to shock, vibration fatigue and wear.

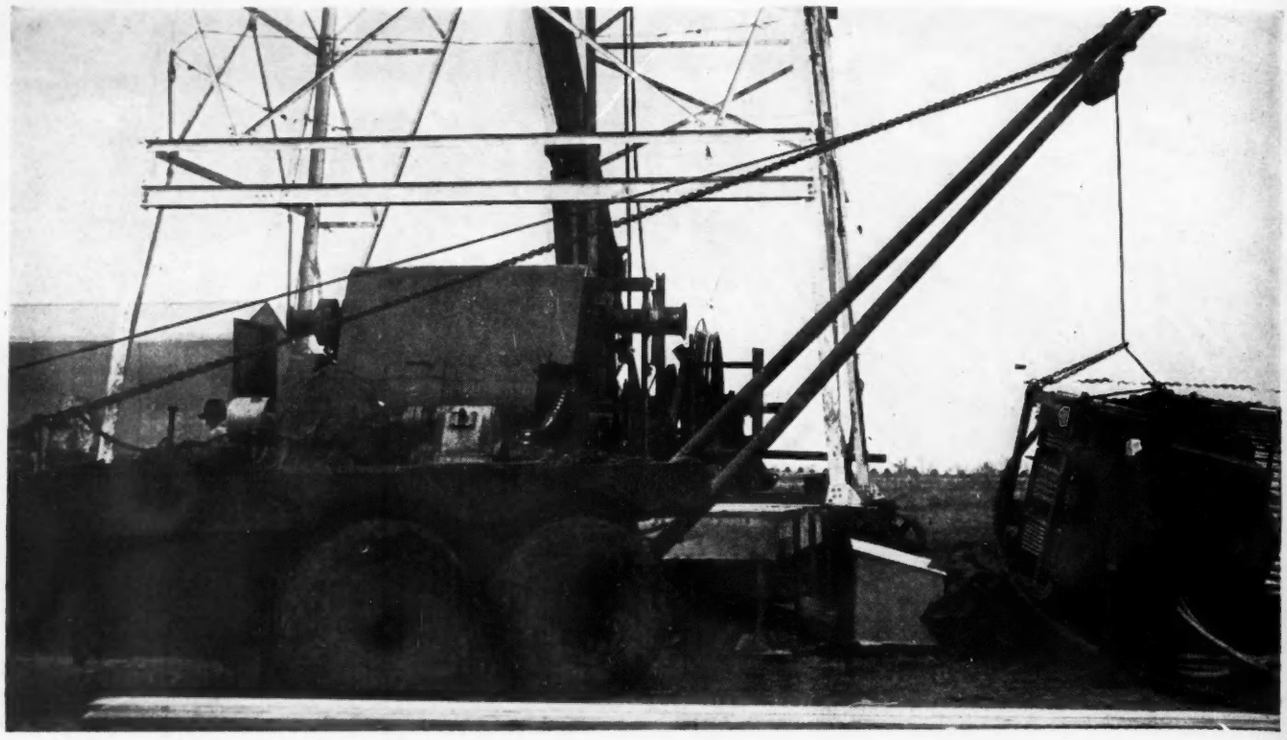
Moreover, Kerotest Xmas Tree Fittings are machined on the same precision equipment on which the valve bodies are machined. As a result of this accurate method of machining, the Fittings when assembled in the Xmas Tree, are concentric and the axis of the bores in the case of Crosses and Tees are in the same straight line.

Why not make YOUR next well setting 100 per cent Kerotest, too? It's the logical thing to do.

KEROTEST

KEROTEST MANUFACTURING COMPANY

PITTSBURGH, PENNSYLVANIA



Careful handling of equipment when being transported will reduce maintenance.

and do not wire around blown fuses.

4. The contact of the knife switch in its jaws should be full surfaced, and snug. The pivots should also be kept snug. The switch should always be shoved all the way in when closed.

5. Have spare fuses available.

No-Fuse Breaker Type Disconnect Switch

1. Having installed correct capacity, keep leads securely fastened.

Linestarter

1. Use a starter with a capacity equal to the motor rating — not smaller.

2. If overload protection is of thermal type, use heater element whose ampere rating is correct for the ampere rating of the motor actually being controlled. If overload protection is of current coil—solenoid type, plunger action should be free, auxiliary contacts should be kept clean, and the setting should be as recommended for the motor actually being controlled.

3. Do not block in the starter if it trips due to overload.

4. Keep arc chutes in place and in good condition.

5. Contacts should be replaced when sufficiently worn to affect the contact pressure or speed of opening.

6. Investigate trouble and permit motor to cool before resetting overload trip.

Selector Switch or Master Switch Handling Control Circuit

1. Keep fingers and connections securely tightened.

2. Fingers should have adequate pressure on drum—they should drop 1/16-inch to ⅛-inch when moving off of contact segment.

3. Keep contact surface of drum slightly lubricated with vaseline. Do not permit lubricant to accumulate—clean off thoroughly and apply clean coat sparingly. If atmosphere is particularly dusty it is advisable to eliminate the lubricant.

4. Keep cover on to keep clean and for safety.

Drum Controllers Handling Main Line Current

1. Note items under selector switch, except eliminate lubrication of contact surfaces.

2. Keep fingers free of beads to assure low resistance contact. Poor contact may mean arcing or burning and consequent welding of fingers.

3. Both bearings, starwheel and pawl should be kept clean.

4. Arc barriers should be kept securely in place and in good condition.

5. Finger mounting bar should be kept free of any accumulation of grease or dust to maintain adequate creepage distance between fingers.

6. Renew finger tips when worn so much that adequate pressure cannot be maintained.

7. Keep covers on.

Oil Immersed Master Controller or Drum Controller

1. See items on master and drum controllers.

2. Keep oil level at proper height.

3. Clean out oil tank occasionally.

4. Renew or filter oil occasionally.

Pushbuttons—Emergency or Operating

1. Maintain secure mounting.

2. Keep contacts clean and leads tight.

3. Use emergency stop button occasionally for normal stop.

Contactors

1. With *power off* check contactor for free mechanical operation.

2. Keep mounting screws or bolts tight.

3. Keep shunt connections tight.

4. See that armature hinge pins are in place, and properly secured.

5. Keep contactors free of oil and dust—accumulation of oil or

MODERN---
DEPENDABLE
------SAFE

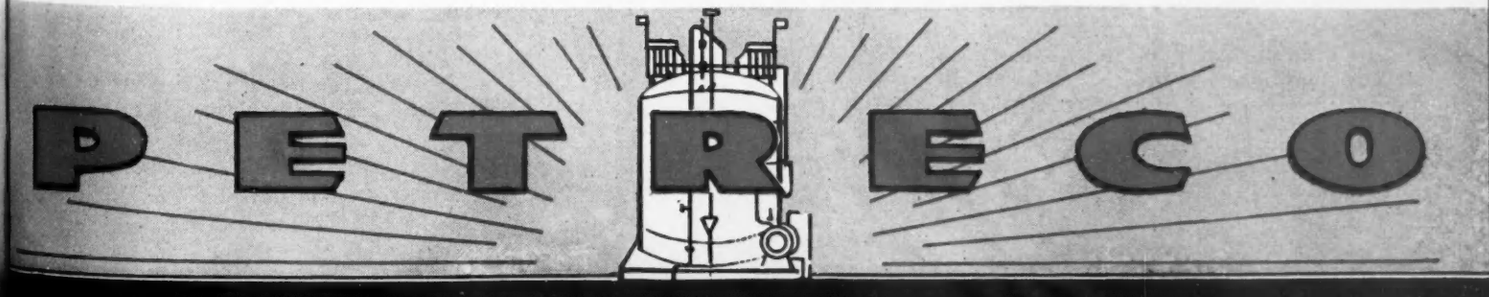
The Petreco Engineering and Technical departments are continuously working out improvements in Petreco Electromatic dehydrating and de-salting equipment and processes. As a result, every new installation is the ultimate in modern dehydration and de-salting procedure.

All improvements and developments can be added to equipment in service at moderate cost whenever desired, practically achieving perpetual modernization and peak performance of plants, and an absolute minimum of obsolescence.

Petreco dehydrator and de-salting units are designed and fabricated in accordance with the API-ASME code, and comply fully with the strictest requirements of oil field and refinery service.

PETROLEUM RECTIFYING COMPANY OF CALIFORNIA

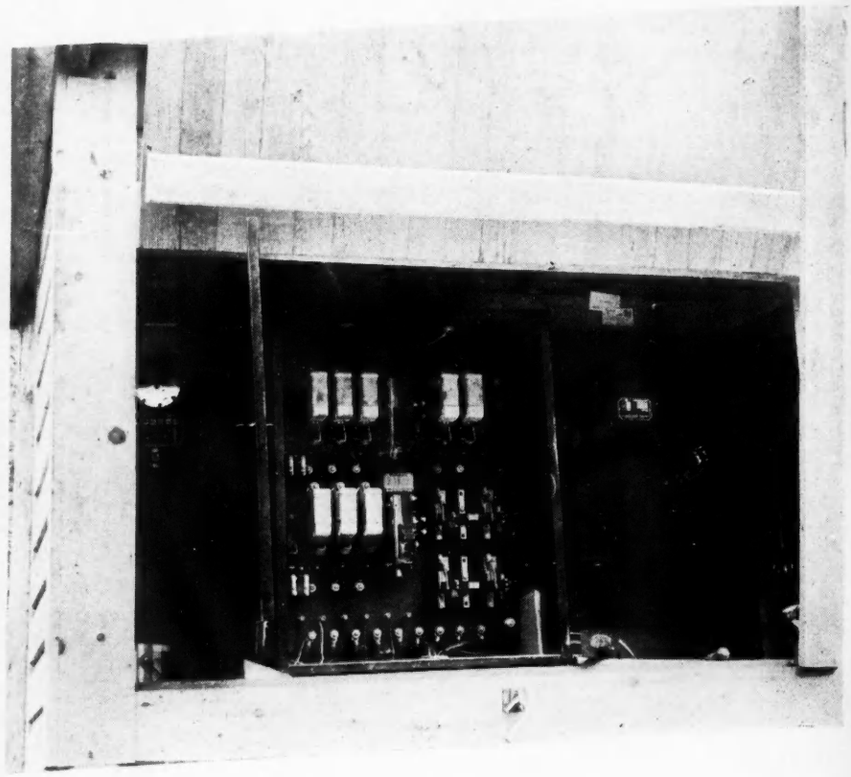
General Offices: 530 West Sixth Street, Los Angeles, California
Branch: Houston, Texas. Branches and Service Men in Principal Oil Fields



NON-WEATHER PROOF APPARATUS MUST BE PROTECTED

The non-weather proof apparatus to the right is effectively protected. The door of the housing is propped open.

The non-weather proof disconnect switch below is protected by a canopy.



dust may result in breakdown at creepage points.

6. Use no oil or other lubricant on the contacts or bearings.

7. Arc shields should always be kept in place so the arc is broken in the field of the blowout coil.

8. The arc shield should be replaced before the moulded material is burned away sufficiently to expose the pole pieces.

9. Renew contact when worn so much that adequate pressure cannot be maintained.

10. Maintain adequate contact pressure as prescribed by the manufacturer. Inadequate pressure may result in overheating, and possibly arcing and welding in of contactor. Where several identical contactors are used, one may be checked against the others if suspected of having low contact pressure and the correct pressure is not definitely known. To measure the final spring pressure, close the contactor mechanically, place a thin piece of paper between the tips, then measure the pull necessary to separate the tips by means of a hook spring balance attached to the head of the moving contact screw. Read the pounds pull required at the instant the paper can be moved. In case the contact pressure is below the minimum value after the tips have been replaced, the spring must have become weakened and should be replaced by a new one.

11. Failure of a contactor to operate may be due to:

A. Loose or disconnected lead to operating coil.
B. Operating coil may have an open circuit.
C. Excessive mechanical friction due to accumulation of dust or other cause.
D. Power off or voltage too low.

12. Failure of Contactor to open may be due to:

A. Mechanical interference or friction.
B. Contacts welded together.
C. Broken contact spring.
D. Low spring pressure insufficient to overcome residual magnetism.

Interlocks

1. Keep contacts clean to assure good circuit.

2. Check for free mechanical action.

3. Keep connections tight.

Terminal Boards or Junction Boxes

1. Keep free of accumulation of dust or oil.

2. All connections should be tight—front and rear.

3. Studs should be tight on panel.

4. Keep cover on to keep dry, clean and safe.

Resistors—Main Circuit or Field

1. Assure free ventilation.

2. Keep screen or perforated covers on to assure protection against mechanical injury, and for safety.

3. All terminal connections should be kept tight. Loose terminals may mean loss of circuit, over-heating or arcing.

4. Tie rods of grid resistors should be checked occasionally to be sure they are tight. Loose grids mean loss of potential, overheating and probably arcing.

Wire and Cable

1. Protect wiring from mechanical injury.

2. Mount wiring to eliminate chafing due to vibration.

3. Mount wiring so it is protected from overheating—do not carry it over grid banks, exhaust pipes, or steam lines.

4. Wiring strung on the ground should be run in a trough to pro-

Sets a New Record

LINK-BELT *red-hed chain*

● This Gulf Coast wildcat was drilled to 10,574 ft. with Link-Belt Red-Hed chain, which is recommended for 5,000 ft. drilling. It serves as an excellent example of the high safety factor of Link-Belt chains.

In addition to rotary drilling chains, Link-Belt oil country products include: Rotary Mud Vibrating Screens, Silent Chain Drives, Roller Chain Drives, Flexible Couplings, Speed Reducers, Pillow Blocks, Clutches, Take-ups, Collars, and other products.

Link-Belt Company, Indianapolis, Houston, Dallas, Tulsa, Los Angeles or New York. 7194

The Link-Belt Vibrating Rotary Mud Screen, also in use on this job, is the operator's assurance of proper mud conditioning.

tect it from being walked on or driven over repeatedly.

5. Wiring should be protected from oil spray unless of special type to withstand oil.

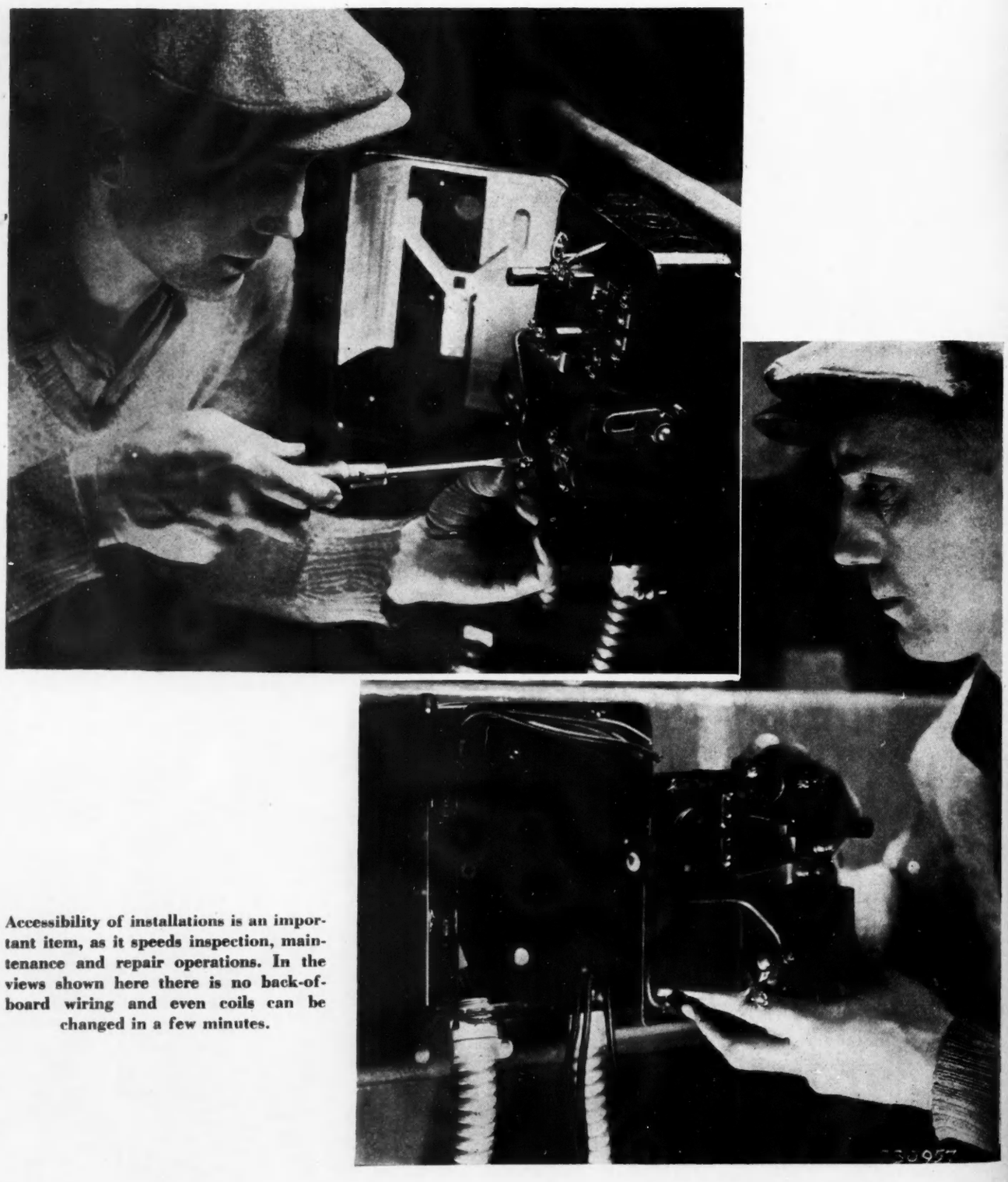
6. Non-waterproof wiring should be protected against water soaking.

7. Cable connections for cable extensions must be kept tight and should be protected against shorting or grounding.

Water and Electricity Do Not Mix

Water on the working parts of electrical apparatus usually means the electricity will follow courses not planned for. It is well to remember this in connection with all electrical apparatus. Apparatus built in such a way to protect it from water must be maintained so that such protection is not destroyed or eliminated.

Control apparatus must be kept dry. The apparatus is frequently mounted in cabinets which permit outdoor installation, in which case, if properly mounted and maintained, the enclosed apparatus is kept dry. Control apparatus in non-weatherproof cabinets is sometimes used in exposed places, but it should always be protected by a canopy or an auxiliary cover. The following points should be checked



Accessibility of installations is an important item, as it speeds inspection, maintenance and repair operations. In the views shown here there is no back-of-board wiring and even coils can be changed in a few minutes.

SUCH POPULARITY DIDN'T JUST "HAPPEN"

The general use of PITTSBURGH SEAMLESS throughout the oil fields is not just a "happenstance". It is the result of studied effort on the part of Pittsburgh Steel Company engineers to design and manufacture a better product than the best competitive product. To this end, Pittsburgh Steel Company engineers maintain a continuous survey of oil drilling progress, meeting every improvement in drilling technique with corresponding improvements in casing, pipe and tubing design.

PITTSBURGH STEEL COMPANY
PITTSBURGH, PA.

New York Philadelphia Cleveland Detroit Chicago
Memphis Charlotte Tulsa Los Angeles Houston
Export Distributor: Lucey Export Corp., New York, N. Y., U.S.A.

Pittsburgh Seamless

CASING · DRILL PIPE · OIL WELL TUBING

FOR *Brilliant* PERFORMANCE

THERE IS NOTHING SUPERIOR TO SEAMLESS

The armature of this motor starter can be removed without loosening any wires or dismantling any other parts.

in connection with outdoor installations:

1. Equipment should be mounted so it cannot be submerged in a heavy downpour of rain.
2. Covers must be kept closed and securely bolted.
3. Gasket should be kept in good condition to assure a tight seal.
4. Check for accumulation of water in bottom of case due to condensation.
5. If apparatus is in non-weather-proof cabinet it should be effectively protected by canopy or an auxiliary cover. The cover should permit adequate ventilation.

Corrosion-Proof and Explosion-Proof Equipment

This type of equipment is usually protected by means of an oil bath, an explosion-proof case, or a supply of non-explosive and non-corrosive air. With this type of equipment the following points, consistent with the type of equipment used, should be checked periodically.

1. Maintain proper oil levels—If corrosion-proof — all bare parts should be submerged. If explosion-proof—minimum head of 6 inches of oil above all contacts and connections.
2. Keep case and cover tightly bolted together if cabinet is of explosion-proof dry type.
3. Check source of ventilation air to be sure it is safe.
4. Check discharge of air at apparatus to be sure it is adequately fed with safe air.

Equipment which has been transported should always be checked for mechanical injury due to improper handling or accident, and for loose connections or mounting. It is of course advisable to avoid possible damage by planning for proper handling and mounting during transportation.

In addition to having a list of items to check for proper maintenance it is necessary to have a schedule for such checking. Haphazard inspection is seldom adequate, and usually results in trouble, damage and shutdown. Regularly and properly timed inspection usually results in correcting unsatisfactory conditions before they accumulate as a menace to reliable and uninterrupted operation. The proper schedule of maintenance must be based on such items as type of equipment, type of service, duty cycle and climatic or atmospheric conditions.

Control apparatus and other electrical equipment is available for the oil fields which will give very satisfactory service with reasonable inspection and maintenance.

Reprints of the foregoing article are available at nominal cost. Write The Gulf Publishing Company, Houston, Texas.

Photo Courtesy—"Old Slatts—The Dynamiter."

NAW— I don't give in easy!

And when that Sievers' peddler come sidlin' up to me on the rig and started talkin' reamers—boy, did I land on him all sprawled out?

Becuz, yuh see, I didn't believe in reamin'—had too much grief with reamers holdin' up the bit, doin' no good, and raisin' the devil generally.

But yuh know that peddler was a sticker, and he didn't scare worth a hoot. Acted like a man who knew he had a reamer that a feller could run in the hole and do a job and haul 'er out again all in one piece . . .

So, I give in and let him send one out and we run 'er behind the bit in some of the hardest, toughest shale a driller ever cussed about. And, brother, she wuz a darb! Smoothed up the runnin' of that bit plenty—didn't hold 'er back at all—and when we come to set casin' you couldn't find a tight spot all the way down.

Sold? Sure I'm sold. So's all the boys on the rig, and if that feller from Sievers comes around wanting to talk reamin' you better knock off and listen to him.

Yeah, I'm telling you—he's got somethin'!

SECURITY ENGINEERING CO.

108 WEST WHITTIER BLVD., WHITTIER, CALIFORNIA
BAKERSFIELD • VENTURA • KETTLEMAN HILLS
Export: Security Engineering Co., 420 Lexington Ave., New York City
Gulf Coast: Wilson Supply Co., Houston, Texas
South America: S. B. Schnitter, No. 4 Mary St., Port of Spain, Trinidad, B.W.I.

SIEVERS REAMERS

MEN IN THE INDUSTRY'S NEWS

W. E. SCHOENECK has been appointed division engineer for The Ohio Oil Company, with headquarters at Shreveport, Louisiana. He formerly was district engineer for the company in the East Texas field.

J. L. TERRY, division engineer for The Texas Company, has returned to Tulsa headquarters from an automobile trip to the gulf coast.

ARTHUR G. LEVY has been named production manager of Crown Central Petroleum Corporation at Houston. He is chairman of the southwestern district of the production division, American Petroleum Institute, and was formerly district engineer at Shreveport with The Texas Company.

M. T. SMITH, with Shell Petroleum Corporation, Houston, has been transferred to Midland, Texas, to head the crude oil purchasing division in West Texas and New Mexico.

G. L. SHOEMAKER formerly with Shell Petroleum Corporation, Hobbs, New Mexico, has been transferred to Houston to replace M. T. Smith.

H. H. LEYENDECKER, chief scout for Tide Water Associated Oil Company, Houston, spent several days last week in San Antonio and Midland on a inspection trip.

J. ELMER THOMAS, consulting geologist of Fort Worth, Texas, was the principal speaker at the Houston Geological Society's regular weekly meeting last Thursday. His subject was "International Geological Congress," held in Moscow last summer.

ROBERT H. DOTT, director of the Oklahoma Geological Survey and a former Tulsa geologist, spoke before a meeting of the Tulsa Geological Society November 1 on "Something Besides Oil," dealing with the discovery and development of Oklahoma mineral resources other than oil. Dott has been working with the federal government on the survey during the past several years.

J. A. DAVIS, auditor of Mexican Sinclair Petroleum Company, has returned to headquarters at Tampico, Mexico, after a vacation in the United States.

J. C. WILLIAMSON, toolpusher for Mexican Gulf Oil Company on wildcat drilling operations near Valles, State of San Luis Potosi, Mexico, was in the United States recently.

JOHN W. EMCH, San Angelo, Texas, consulting geologist and oil producer, and Mrs. Emch are vacationing at New Marinsville and other points in West Virginia.

PAUL V. BARRETT, personnel director of Ohio Oil Company with headquarters at Findlay, Ohio, addressed the Home Telephone Athletic Association at Fort Wayne last week on "The Advantages of Insecurity."

C. C. MACKAY, superintendent of the land and leasing division of Carter Oil Company, Tulsa, will be promoted to executive assistant to the vice president and general manager.

H. F. MOSES, superintendent of Carter Oil Company's eastern division, Mattoon, Illinois, will be transferred to Tulsa as co-ordinating assistant in the geological, geophysical and scouting divisions.

RUSSELL D. MAY, natural gasoline plant engineer for Phillips Petroleum Company, has resigned to become assistant district engineer for the Gas Lift Corporation in the greater Rodessa area, with headquarters at Atlanta, Texas.

GEORGE W. LAPEIRE, consulting geologist, has moved his office from Flora, Illinois, to Olney, Illinois.

M. W. FULLER, with Carter Oil Company, Tulsa, has been named division geologist with headquarters at Mattoon, Illinois.

A. H. CULVER, head of the land and lease department of The Texas Company at Houston, was a recent business visitor in Tulsa.

ROY MEAD, JR., geologist and petroleum engineer, who has been doing special work for the Munger Oil Information Service at Los Angeles, has accepted the position of petroleum and valuation engineer with Mohawk Petroleum Company, with headquarters at Bakersfield.

JOHN M. MOUSER, land man for Sinclair Prairie Oil Company at Fort Worth, has resigned to join the land department of Turman Oil Company. He will make his headquarters in Tulsa, and will be general land man for Oklahoma, Texas, Kansas and New Mexico.

S. F. SHAW, consulting engineer for Westgate Oil Company, San Antonio, Texas, recently left for Los Angeles, where he is making investigations for his company in the Wilmington field.

HARUKICHI TAKAHASHI, petroleum engineer for the Formosan government, Taihoku, Japan, is visiting fields of the Texas and Louisiana Gulf Coast.

DIED:

L. L. DIMIT of Neosho, Missouri, one of the oldest pioneers of the oil industry, who was nominated in 1936 for the "Grand Old Man of the Petroleum Industry," an award made in connection with the International Petroleum Exposition, was buried in Neosho November 4. He died November 3 at 12:30 a.m. at the age of 86.

Born in Allegheny County, Pennsylvania, in 1851, Dimit went to work in oil fields when he was 11 years of age. He followed the oil field developments throughout several eastern states, eventually joining up with Gypsy Oil Company in Oklahoma in 1919, remaining with that organization until his retirement in 1927.

He is survived by Mrs. Dimit, three sons and two daughters. The sons, all in the oil business, are C. P. Dimit, vice president of Phillips Petroleum Company, Bartlesville, Oklahoma; W. H. Dimit of Fly, Ohio, and J. L. Dimit, Gulf Oil Corporation, Sapulpa, Oklahoma. The daughters are Miss Hester Dimit of Neosho and Mrs. Elizabeth Butler of Minneapolis.

ERNEST EARL BROGDON, 38, purchasing agent for the Cosden Oil Corporation, was found dead October 30 at his apartment in Fort Worth. He apparently was stricken while asleep.

EARL ALVERSON, 25, field workman for The Girard Corporation, Dallas, died November 2 at a Corsicana hospital from head injuries sustained while on duty in the Corsicana-Powell field.

EARL MONAGHAN, 51, of the oil promoting and developing firm of Monaghan & Kroger, St. Louis, Missouri, died October 29 in a hospital at Salem, Illinois, from injuries sustained several hours earlier in a motor car accident a mile east of that city. He had made his home in Flora recently while his firm was active in development work in the Illinois coal basin area. Surviving are one son, his father and one sister.

ISAAC SHULER, 71, active in the petroleum industry for 55 years during which time he was connected with producing interests in many major United States fields, died October 25 at his home in Mt. Pleasant, Michigan, following a two year's illness. He was the organizer and backer of several independent companies and during the past nine years had been active in Michigan fields. Surviving are his widow and three grandchildren.

WOODROW ADDISON, 30, oil field worker in the Patoka field of Marion County, Illinois, was killed in an automobile accident west of Salem on October 28.

JAMES W. BEVERIDGE, drilling contractor, who has resided in Mexico for 18 years, died of typhoid fever in a hospital at Tampico on October 30. He was born in San Francisco, California, of Canadian parentage, 44 years ago. For several years past he and his brother, David, have been drilling wells under contract for various companies on the Isthmus of Tehuantepec. Beveridge is survived by his wife.

HAROLD C. "HAPPY" HALLIDAY, driller, died at his home in Tampico, Mexico, on October 28, of a stomach ailment. He had lived in Mexico for 20 years, and worked for a number of the largest oil companies in the republic. For several months past he has been in the contracting end of the oil business. He was 54 years of age, and is survived by his wife.

Signs of Unsteadiness

Gasoline market weak with some decline reflected in refinery tank car prices

DESPITE various important advantages that the oil industry holds, its markets have continued to show signs of unsteadiness, particularly as regards the gasoline situation.

The gasoline market has remained weak, and in some instances tank car prices at refineries have declined another one-eighth cent within the past 10 days.

The weakness of the gasoline situation has continued in the face of the fact that demand has held up better than expected, because of protracted mild weather.

Crude Market Holding

The crude oil market, however, has retained previous price levels, and there is still not apparent any immediate danger of price weakening.

The firm crude market undoubtedly is based largely on the strict control of crude production which has prevailed for several months and which is scheduled to continue in November under the allowables of the leading producing states.

Gasoline Market Weak

However, it is becoming doubtful if the crude market can persistently hold its own, in the face of the continuing weak gasoline market.

Some of the refiners are asserting that they no longer are able to operate profitably, turning out gasoline at present lower prices from crude oil priced at the former levels.

However, this attitude of the refiners is considered by some a hopeful sign that may portend a better situation generally in the industry's markets. For it is hoped that gasoline output of the refineries may be cut back to more economic levels, and that the gasoline markets consequently will be strengthened.

A present levels, the gasoline prices at refineries are down an average of over ¼ cent a gallon from a month ago. They are, however, about ¼ cent a gallon better, on the average, than at this time last year. The present prices do not compare especially favorably with those a year ago, nevertheless, in view of the fact crude prices were increased generally about 10 percent early in 1937.

Other Products Steady

While the gasoline market is unsteady, the general situation appears hopeful, not only because of the persisting firmness of the crude market, but also because of continued steadiness of the markets for refined products other than gasoline.

The demand is good for fuel oils, and prices are holding steady at former levels, which are comparatively attractive for the industry.

The statistics of the industry remain generally satisfactory, with exception of gasoline inventories, which are greater than needed and which apparently have been largely responsible for the declines of tank car prices in the past six weeks. The gasoline stocks in the country are about 15 percent larger than at this time last year, whereas in the meantime gasoline demand has expanded only about 10 percent.

Fuel oil inventories continue to show a smaller increase over a year ago than the gain, meanwhile, in demand; and this situation probably has contributed much to the strength of the fuel oil market.

Burner Sales Tapering

Also helping to explain the strength of the fuel oil market is the relatively great demand that has developed in recent years, mainly in consequence of the many installations of oil burners as new residences have been built.

Shipments of oil burners by American manufacturers have been tapering off lately, but for this year as a whole, more sales are shown than for the similar period last year. In the first 9 months of 1937, the shipments totaled 149,870 burners, compared with 135,271 in the similar period of 1936, and with 95,464 in the first 9 months of 1935.

For September, this year, however, the shipments were down to 33,711 burners, compared with 35,405 in September last year.

Refinery Prices Lower

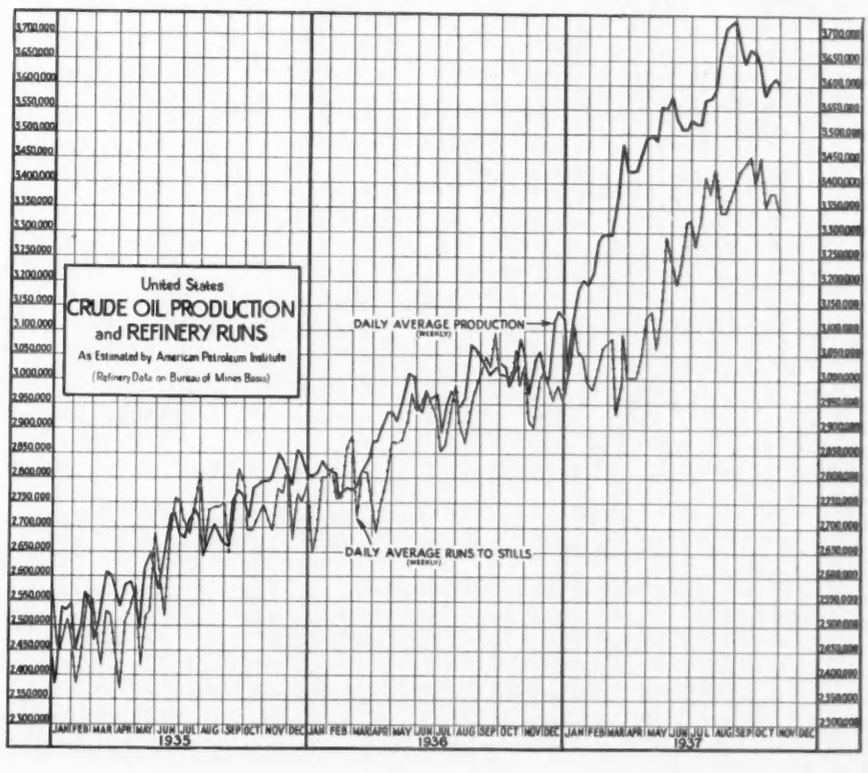
Tank car prices at Mid-Continent refineries late last week were generally ⅛ cent a gallon lower than in the previous week.

U. S. Motor gasoline ranged in the Oklahoma market about as follows: 62 octane and below, 4⅜ to 4⅝ cents a gallon; 63 to 66 octane, 4⅞ to 5⅛ cents; 67 to 69 octane, 5⅛ to 5⅜ cents; and 70 to 72 octane, 5½ to 5⅞ cents.

Prices in the Chicago market ranged as follows: 62 octane and below, 4¼ to 4½ cents; 63 to 67 octane, 4¾ to 5¼ cents; and 68 to 70 octane, 5⅛ to 5⅝ cents.

At East Texas refineries the most common product, 60-62, 400 end point gasoline, was priced from 4⅝ to 4⅞ cents a gallon.

Kerosene prices f.o.b. Oklahoma refineries ranged from 4 to 4¼ cents a gallon for the 41-43 water white grade, and from 4¼ to 4⅜ cents for the 42 44 water white grade. Corresponding prices in the Chicago market were: 4 to 4¼ cents and 4⅛ to 4⅜ cents.



LAYNE SCREEN

Gives You CLEANER OIL!

The Semi-wedge shaped wire on Layne Wire Wrapped Screen has greater separating ability. It lets in more oil—keeps out more sand, with less danger of sand clogging.

The opening between the wires is wedge-shaped, the narrow end being the screening point. Oil entering, a Layne Screen is remarkably free of sand. This cleaner oil saves wear on the pump and pump parts. It helps reduce pumping costs.

Layne Wire-Wrapped Screens are precision made and available in Milled Groove, Plain Drilled, or Slotted Pipe types.

The Layne & Bowler Company, Houston, Texas, U. S. A. Export: Room 1636, 30 Rockefeller Plaza, New York, N. Y.

THE LAYNE

SCREENS

Government agency sees business recession in 1938

POSSIBILITIES of a falling off in demand for petroleum products are seen by officials in Washington in predictions of a sharp recession in industrial production and trade. Continuance of the downward price trend and a lowering of the national income, issued this week by the Bureau of Agricultural Economics of the Department of Agriculture.

Highlights of the 1938 forecast were that industrial production will average lower than in 1937, with conditions for the second half of the year probably more favorable than those of the first six months; national income will be under the high expected for this year, now estimated at about $69,000,000,000; and the general tendency of wholesale prices will be downward until well into 1938, with lower prices for some raw materials, farm products and manufactured goods offsetting higher prices for some finished and semi-finished products.

The report represented a complete reversal of the official attitude in Washington, which for some weeks has been characterized by frequent pronouncements that business was in a satisfactory condition with a hopeful outlook for the future.

No official could be found, however, who would attempt to controvert the bureau's statements, even Secretary of Commerce Roper, consistent prognosticator of industrial improvement, contenting himself with the suggestion that to endeavor to delve into the future, in the face of so many differing situations existing throughout the world, is impracticable.

Venezuela negotiating for reciprocal trade agreement

Negotiation of a reciprocal trade agreement with Venezuela was seen last week by Russell B. Brown, general counsel of the Independent Petroleum Association of America, as possibly involving a reduction in the excise taxes on imports of petroleum from that country, a concession which would automatically be extended to all other nations to which we accord most-favored-nation treatment.

Pointing out that the trade agreements act provides that import taxes may be increased or decreased up to 50 percent by reciprocal treaties, Brown declared November 3 that it has been held by the State Department that excise taxes, such as those levied on petroleum and its products, may be treated the same as tariffs.

That the Venezuelan government will seek to secure a concession in the oil taxes is indicated by the fact that petroleum constitutes the bulk of United States importations from Venezuela, 28,426,353 barrels of crude being imported in 1936 with a value of $19,413,353, while all imports, including oil, amounted to $26,261,067. In 1929, United States imports of Venezuelan oil totaled 31,431,388 barrels valued at $32,609,091.

"Exports from Venezuela," Brown pointed out, "are not necessarily Venezuelan exports. This is especially true in regard to the petroleum produced in that country and shipped to the United States. The companies which are exporting this Venezuelan product are foreign companies. Most of them are American companies or subsidiaries of American companies which are developing or exploiting (according to one's viewpoint) the resources of a smaller nation."

CRUDE OIL PRICES

Complete tables of prices paid for crude oil at the well in principal fields is shown on page 50 in the issue of November 1. This schedule will appear only in the first issue of each month.

Comparison of Permits Granted for New Wells

STATE	Week Ending Nov. 6	Total this Mo.	Total this Year	Total this Date Last Year	1936 Year Total
Arkansas	9	36	222	82	103
California	28	197	1,360	909	1,054
Louisiana	32	161	1,100	970	1,107
Kansas	39	342	2,401	1,560	1,873
Michigan	23	122	851	629	762
Oklahoma	55	269	2,411	2,460	2,594
Texas	200	1,825	15,198	12,929	15,582
Total	386	3,052	23,543	19,539	23,075

Trends of United States Production and Stocks

Figures are from American Petroleum Institute weekly reports, except those on crude stocks, which are from Bureau of Mines weekly report.

WEEK ENDED	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	Gas & Fuel Oil Stocks (Barrels)
January 2, 1937	3,121,400	3,030,000	287,659,000	62,661,000	106,330,000
January 30	3,194,050	2,995,000	285,384,000	69,540,000	102,078,000
February 27	3,296,100	3,085,000	288,121,000	78,786,000	99,534,000
March 27	3,431,300	3,060,000	293,587,000	*83,538,000	96,591,000
April 24	3,496,400	3,125,000	300,737,000	82,303,000	94,100,000
May 29	3,573,000	3,245,000	306,445,000	78,758,000	96,139,000
June 26	3,529,600	3,235,000	307,679,000	75,427,000	100,395,000
July 31	3,591,900	3,425,000	308,250,000	70,872,000	108,209,000
August	*3,731,450	3,425,000	309,506,000	66,997,000	112,111,000
September 25	3,666,300	*3,455,000	307,974,000	65,620,000	116,472,000
October 2	3,647,450	3,400,000	309,036,000	65,266,000	117,076,000
October 9	3,579,050	3,350,000	309,009,000	65,532,000	118,442,000
October 16	3,602,150	3,380,000	307,897,000	65,760,000	119,155,000
October 23	3,613,300	3,380,000	306,556,000	66,554,000	119,634,000
October 30, 1937	3,602,950	3,345,000	.....	66,836,000	121,070,000
October 31, 1936	3,043,500	3,040,000	†291,846,000	57,982,000	114,307,000
Change in past year	+18.0%	+10%	+5.0%	+15.3%	+5.9%

* All time peak.
† Stocks October 24, 1936.

Summary of Wells Completed in the United States Week Ending November 6, 1937

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total 1937	Total this Date, 1936
Alabama	....	....	....	....	.....	1	2
Arkansas	6	4	....	2	4,072	112	79
California	22	19	....	3	15,006	1,280	973
Colorado	....	....	....	....	.....	17	14
Florida	....	....	....	....	.....	1	1
Illinois	12	12	....	....	4,054	286	4
Indiana	17	2	6	9	7	122	160
Kansas	53	43	1	9	59,616	2,306	1,437
Kentucky	22	11	3	8	422	424	238
Louisiana	24	17	....	7	10,765	837	884
Michigan	22	18	1	3	4,899	824	672
Mississippi	2	....	....	2	.....	13	6
Montana	3	1	1	1	100	177	159
Nebraska	....	....	....	....	.....	....	.....
New Mexico	8	8	....	....	1,613	596	489
New York	1	....	1	....	.....	21	.....
Ohio	21	6	8	7	181	1,270	1,637
Oklahoma	50	37	1	12	12,783	2,588	2,475
Pennsylvania	5	....	3	2	.....	181	.....
Texas	321	241	21	59	366,208	13,077	10,769
Utah	....	....	....	....	.....	....	.....
West Virginia	21	5	12	4	46	798	548
Wyoming	4	1	2	1	163	94	73
Total this week	614	425	60	129	479,935	25,025	20,620
Total last week	600	425	48	127	540,137	....	.....
Total this year	25,025	17,413	2,100	5,512		....	.....

Crude Output Declines

Drop still leaves nation producing 47,800 barrels per day more than Bureau of Mines recommendation

UNITED STATES crude oil production showed a decline in the past week, ended November 6, averaging 3,556,800 barrels daily, or 48,750 barrels a day less than in the previous week and 47,800 barrels a day more than the estimated demand by the Bureau of Mines for November.

Texas and Kansas Down

Reflecting sharp cuts in the state allowable for all principal producing states, Texas and Kansas showed the biggest declines in the past week, while the output of the remaining four states decreased slightly.

Texas production last week averaged 1,445,600 barrels daily, or 21,700 barrels a day less than in the previous week, 32,300 more than the Bureau of Mines recommendation and 93,923 barrels a day more than the state allowable.

Kansas likewise showed a sharp drop of 11,375 barrels daily, averaging 174,225 barrels, which was 5990 barrels less than the state allowable and 15,475 less than the Bureau of Mines indicated demand.

California production was down 4000 barrels, the average production having been 693,000 barrels daily, which was 18,400 barrels a day in excess of the federal allocation and the recommendation of the Central Committee of California Oil Producers.

Oklahoma output declined 4350 barrels to 582,375 barrels daily. That was 15,625 barrels a day less than the Bureau of Mines estimate and 7375 barrels in excess of the allowable prescribed by the state.

Louisiana last week averaged 240,700 barrels daily, which was 6775 barrels less than in the previous week, 5500 less than the indicated demand and 12,450 less than the state allowable.

Phillips buy Kraft leases

Bartlesville.—Phillips Petroleum Company has purchased the interests of C. L. Price of Hoisington, Kansas, in the Kraft pool of Barton County, the consideration reportedly amounting to $1,000,000. Of this amount, $300,000 is to be in cash and the remainder in oil royalties. Involved in the deal are two wells with a total potential production of 4978 barrels of oil daily. Acreage includes NE¼ 10-17s-11w and SE¼ 11-17s-11w.

Humble to build natural gasoline plant in Heyser

San Antonio, Texas.—Humble Oil & Refining Company proposes to start construction work shortly on a well-pressure type natural gasoline plant to process gas in the Heyser field, Calhoun County. The plant will be located on the company's P. H. Welder "B" lease, according to reports.

United States Crude Oil Production

Estimates Compiled by The OIL WEEKLY

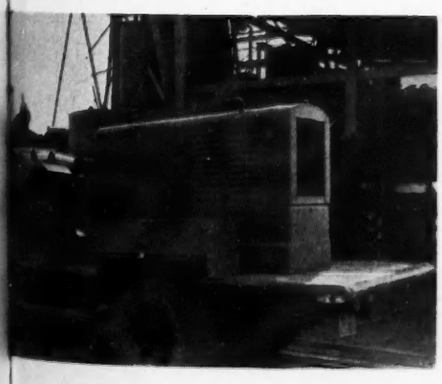
DISTRICT OR STATE	Bureau of Mines Recommendation (Daily in Nov.)	State Allowable in November	BARRELS DAILY FOR WEEK ENDED	
			November 6	October 30
TEXAS—				
Texas Panhandle	.....	.....	74,100	76,400
North Texas	.....	.....	72,900	74,800
West Central Texas	.....	.....	34,600	34,700
West Texas	.....	.....	209,800	216,100
East Central Texas	.....	.....	110,300	109,500
East Texas Field	.....	.....	483,800	482,800
South Texas	.....	.....	261,300	265,700
Texas Gulf Coast	.....	.....	198,800	207,300
Total Texas	1,413,300	1,351,677	1,445,600	1,467,300
CALIFORNIA—				
Long Beach	.....	.....	58,300	58,000
Santa Fe Springs	.....	.....	41,500	41,500
Huntington Beach	.....	.....	37,000	37,000
Dominguez	.....	.....	28,500	28,500
Inglewood	.....	.....	16,000	16,500
Ventura Avenue	.....	.....	35,500	34,500
Seal Beach	.....	.....	8,700	9,500
Midway-Sunset	.....	.....	72,500	72,000
Elwood	.....	.....	8,500	8,300
Kettleman Hills	.....	.....	78,500	81,000
Mountain View	.....	.....	17,500	17,700
Playa del Rey	.....	.....	8,000	8,000
Wilmington	.....	.....	61,500	63,500
Others	.....	.....	221,000	221,000
Total California	674,600	*674,600	693,000	697,000
OKLAHOMA—				
Oklahoma City	.....	.....	147,275	141,150
Seminole Area	.....	.....	113,300	114,600
Crescent	.....	.....	7,825	8,425
Lucien	.....	.....	15,550	14,150
Fitts	.....	.....	69,650	79,250
Edmund	.....	.....	12,000	12,400
Moore	.....	.....	9,575	9,800
Others	.....	.....	207,200	206,950
Total Oklahoma	598,000	575,000	582,375	586,725
LOUISIANA—				
North Louisiana	.....	.....	72,300	76,275
South Louisiana	.....	.....	168,400	171,200
Total Louisiana	246,200	253,150	240,700	247,475
KANSAS—				
Ritz-Canton	.....	.....	4,775	4,875
Chase	.....	.....	6,125	6,200
Hollow-Nikkel	.....	.....	2,300	2,375
Sedgwick	.....	.....	3,700	3,725
Burrton-Haven	.....	.....	11,650	13,350
Lorraine	.....	.....	1,925	3,250
Russell County	.....	.....	35,400	35,050
Silica-Isern	.....	.....	12,150	18,225
Others	.....	.....	96,200	98,550
Total Kansas	189,700	180,215	174,225	185,600
NEW MEXICO	104,800	104,800	104,600	104,200
MICHIGAN	47,400	.....	53,800	54,400
ARKANSAS	33,100	.....	48,600	48,650
MOUNTAIN STATES—				
Wyoming	56,300	.....	58,300	59,800
Montana	17,100	.....	17,700	17,600
Colorado	4,500	.....	4,100	4,200
Total Rocky Mountain States	77,900	.....	80,100	81,600
EASTERN STATES—				
Pennsylvania Grade	.....	.....	78,500	78,500
Southern Illinois (New Pools)	.....	.....	16,800	15,500
Illinois-Indiana (Old Pools)	.....	.....	16,000	16,000
Others, Eastern	.....	.....	22,500	22,600
Total Eastern States	124,000	.....	133,800	132,600
Total United States	3,509,000	.....	3,556,800	3,605,550

* Recommendation of Central Committee of California Oil Producers.

SLUSH PITS *while you wait!*

P&H BANTAM WEIGHT
EVERYWHERE IN THE OIL FIELDS

'll admire the business-like way in which these Bantam-Weights go about their work. They're ome in the oil fields . . . built of tough alloy steels—all-welded, with the strength and speed to d up and deliver in a he-man's country, and ask mighty little in return. The husky Ford V-8 r delivers all the power you'll ever need—at the lowest operating and maintenance cost ever wn for a unit of this kind. . . The Bantam-Weight's ready for anything—digging slush pits and base-ts—loading pipe or laying pipe—pile-driving or back-filling. It's fully convertible for all types ervice including shovel and trench hoe. Attachments are so simple you can change from one type ervice to another right in the field. Can be mounted on truck chassis or on its own tractor type lers. Special trailer unit permits fast cross-try travel. Ask for full information.



P&H HANSEN

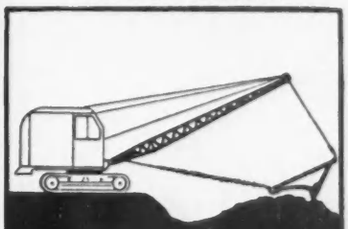
SMOOTHARC WELDERS

On pipe lines, around oil derricks, repairing field equipment, wherever metal is fabricated or repaired, P&H-Hansen Smootharc Welders are doing a full-time job. Available in all sizes and types from 75 to 600 ampere capacity with simple, single-current control which reduces the chance of weld failures. The famous Hansen generator automatically regulates open circuit and arc voltage to produce a steady, smooth arc that means faster, easier depositing of weld metal.

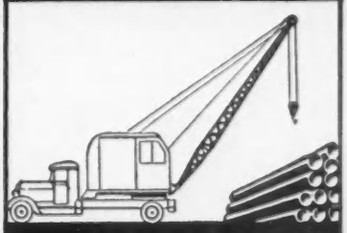
The complete line is described in Bulletin W-10. Write for your copy. Address Harnischfeger Corp., 4528 W. National Ave., Milwaukee, Wis.

Warehouses and Service Stations: Dallas — Los Angeles San Francisco — Hoboken — Memphis — Jacksonville — Seattle

CONVERTIBLE FOR ALL TYPES OF SERVICE



BACK FILLER



TRUCK CRANE

SHOVEL

HARNISCHFEGER
CORPORATION

EXCAVATORS ★ ELECTRIC CRANES ★ ARC WELDERS P&H HOISTS ★ WELDING ELECTRODES ★ MOTORS

1937

Outlook for Rest of Year Promising

October results were good, and November prospects offer encouragement. Optimistic long-range view seems justified, as industry is in sound condition.

By L. J. LOGAN, Associate Editor

DESPITE the generally disturbed business situation and the present weakened condition of the gasoline market, the petroleum industry continues to show good results, on the whole, and the immediate outlook is fairly promising.

Volumes of business continue large, as demand for petroleum and petroleum products remains well above the levels of last year and thus at record proportions.

Prices have been holding, meanwhile, at the established levels, with exception of the gasoline quotations; as the markets for crude oil, fuel oil, kerosene, and most other products have remained stable.

The large volumes of business and the generally favorable realized prices, in turn, have made possible the maintenance of good earnings. And it appears fairly well assured that profits for 1937 will measure up approximately to the optimistic hopes entertained in the more cheerful, earlier months this year.

It seems virtually certain that the price structures will remain at least about as firm as at present until December 1, in view of the strict program of crude production control for November. And hope that satisfactory conditions will extend on through December probably is justified.

Uncertainty Prevails

Because of the uncertainty that has arisen in the general business situation, it appears impractical to attempt to foresee the oil industry's future very far beyond the end of this year.

It still remains uncertain whether business has run into only a temporary interruption or a more serious recession; whether the tide of fortune is now at the flow or ebb; whether the upward trends will be resumed presently, a few months from now, a year hence, or not at all; whether the next several years will be prosperous, satisfactory, or unsatisfactory.

Since business as a whole faces these uncertainties, the oil industry, likewise, looks ahead into an obscure future. For the industry undoubtedly will be affected, at least to some extent, even if not as greatly as some other industries, by the general business developments.

Long-Term View Promising

Nevertheless, even from a long-range viewpoint, the industry has much in its favor, indicating that relatively good results could be maintained over an extended period.

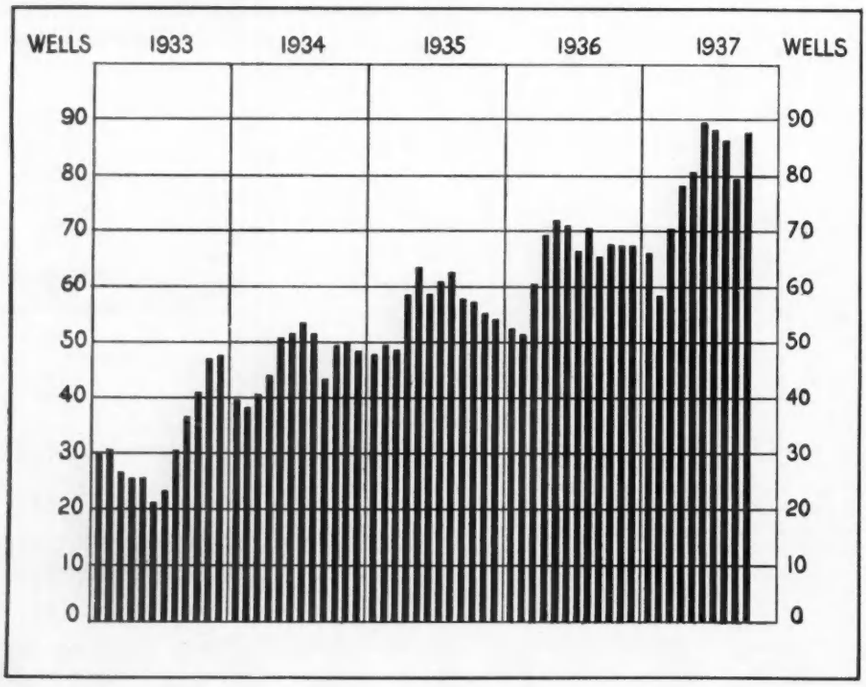
The industry has, for instance, a stable demand for its products, which even the recent severe depression could not materially curtail. In fact, except in depression periods, the normal trend of petroleum consumption is consistently upward, never sideways or downward.

Moreover, the industry has been consistently successful for several years in balancing production with the demand, assuring stable markets and favorable prices; and no serious interruption of this success is threatened.

The successful control of wells and refineries has made it possible, meanwhile, for the industry to reduce above-ground inventories of crude oil and refined products to quite moderate proportions. And the industry today is not handicapped, as in some former years, with surplus stocks; with exception of some excess supplies of gasoline at the refineries, which have been largely responsible for recent weakening of gasoline prices.

The scheduled crude control for November is the strictest of the year. The six leading producing states, yielding about 92 percent of all United States production, have aggregate allowables smaller than the estimated demand. Consequently, some crude oil probably will be withdrawn from storage in November, further improving the inventory situation; and excessive operations at the refineries will be dis-

Average Number of Wells Completed Daily
(By Months, January 1933—October 1937)



NAPHTHAS · FUEL OILS · DIESEL FUELS
KEROSENE · GASOLINE · INDUSTRIAL
AUTOMOBILE LUBRICANTS
BRIGHT STOCKS

Nine strategically located **SHELL** *Refineries*

CALIFORNIA
COALINGA, DOMINGUEZ, MARTINEZ, WILMINGTON

GULF COAST
HOUSTON, TEXAS; NORCO, LA.

MID-CONTINENT
EAST CHICAGO, IND.; WOOD RIVER, ILL.; ARKANSAS CITY, KANSAS

Demand and Inventory Situation

(Figures, indicating barrels, are from Bureau of Mines.)

ITEM	FIRST 8 MONTHS 1936	FIRST 8 MONTHS 1937	FIRST 8 MONTHS Change This Year	AUGUST 1936	AUGUST 1937	AUGUST Change This Year
Demand:						
All Oils	787,923,000	877,108,000	+11.3%	107,066,000	119,477,000	+11.6%
Gasoline, Domestic	313,680,000	344,031,000	+ 9.7%	46,081,000	49,597,000	+ 7.6%
Gas and Fuel Oil, Domestic	61,221,000	71,281,000	+16.4%	6,178,000	7,197,000	+16.5%
Stocks, End of Month:						
Crude Oil	.....	.....	.....	301,757,000	310,923,000	+ 3 %
Refined Oils	.....	.....	.....	234,756,000	241,563,000	+ 2.9%
Natural Gasoline	.....	.....	.....	5,653,000	7,041,000	+24.5%
All Oils, Total	.....	.....	.....	542,166,000	559,527,000	+ 3.2%
All Oils, Days' Supply	.....	.....	.....	157	145	— 7.6%

Changes in Stocks Since End of August

(Crude stocks figures from Bureau of Mines weekly reports; others from American Petroleum Institute weekly reports.)

DATE	Crude Oil, (Barrels)	Gasoline (Barrels)	Gas and Fuel Oil (Barrels)
September 25, 1937	307,974,000	65,620,000	116,472,000
October 2, 1937	309,036,000	65,266,000	117,076,000
October 30, 1937	*306,556,000	66,836,000	121,070,000
October 31, 1936	†291,846,000	57,982,000	114,307,000
Change in past year	+5.0%	+15.3%	+5.9%

* Stocks October 23, 1937
† Stocks October 24, 1936.

couraged. The prospect of more moderate refinery activity, in turn, gives promise of at least a partial correction of the gasoline situation.

October Results Good

Encouragement is given, meanwhile, by the favorable record that the industry shows for October. As in November, the crude oil production allowables were unusually strict in October, and consequently the output of the wells was held in close conformity with market requirements. In fact, the fulfillment of demand necessitated the withdrawal of some crude from storage. Figures on crude stocks are not yet available for the latter part of the month. But between October 1 and October 23, the stocks were reduced about 2,000,000 barrels, and some further reduction may have occurred in the remainder of the month.

Refineries Cut Back

Stricter crude control also has promoted more moderate refinery operations. At the end of October the plants were running only about 10 percent more crude to stills than at the corresponding time last year. That increase was about the same as that which has occurred, meanwhile in petroleum consumption.

However, the output of gasoline was not cut back sufficiently in October to bring much improvement in the excessive gasoline inventory situation. In fact, gasoline production throughout the month ran above current requirements, and additions were being made to gasoline stocks prematurely. In former years the industry withdrew gasoline from storage until the middle of November, before beginning to expand the stocks for heavier spring requirements. At the end of October gasoline inventories were 15.3 percent greater than at the corresponding time last year, although gasoline demand was running only about 10 percent higher. This situation undoubtedly was largely responsible for weakening of the gasoline market.

Drilling continued heavy in October, as completions averaged 87.8 wells daily, compared with 85.2 daily in September, 86.2 in August, and the year's peak of 89.5 daily in June.

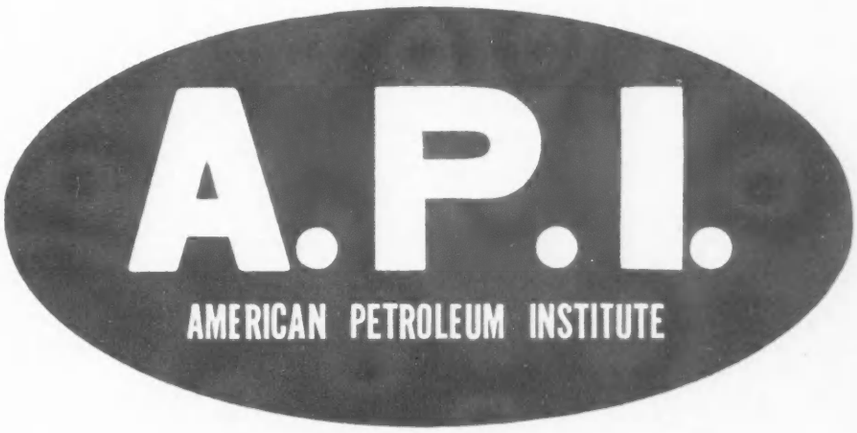
In the first 10 months of this year 23,828 wells were completed, or 21.1 percent more than in the similar period last year. Although most states and districts have experienced expansion of drilling, the greatest gains have occurred in Eastern Texas outside the East Texas field and West Texas, where activity has doubled. Kansas also hows a noteworthy increase of 61 percent.

Drilling and Production in October, 1937, and in First 10 Months of 1937 and 1936

STATE OR DISTRICT	*OCTOBER, 1937, COMPLETIONS AND CRUDE OIL PRODUCTION: Total Wells	Oil	Gas	Dry	Initial Production	Production for Oct.	COMPLETIONS AND PRODUCTION IN FIRST 10 MONTHS, 1937 AND 1936 — WELLS COMPLETED: 1937: 10 Mo.	1936: 10 Mo.	Percent Change	DETAILS OF 1937 PRODUCTION: Oil	Gas	Dry	Initial Production	BARRELS PRODUCTION: 1937: 10 Mo.	1936: 10 Mo.	Percent Change
Arkansas	12	9	...	3	10,246	1,380,450†	99	78	+ 27	49	2	48	26,782	9,352,350	8,968,100	+ 4
California	115	97	1	17	70,772	21,670,400	1,242	938	+ 32	970	14	258	533,477	195,375,900	179,232,479	+ 9
Colorado	5	...	...	5	.....	132,800	16	13	+ 23	3	1	12	2,546	1,307,150	1,405,450	— 7
Eastern States	385	149	125	111	8,341	4,118,800	2,899	2,523	+ 15	953	1,199	747	62,082	37,021,200	33,035,950	+ 12
Kansas	235	160	10	65	231,487	5,758,050	2,190	1,356	+ 61	1,580	100	510	2,043,447	57,550,500	46,511,200	+ 24
Louisiana	80	56	9	15	28,082	7,657,100	797	833	— 4	514	83	200	247,917	76,444,600	66,114,750	+ 16
North Louisiana	46	32	8	6	17,363	2,356,950	404	479	— 16	265	70	69	121,154	24,100,250	21,909,050	+ 10
South Louisiana	34	24	1	9	10,719	5,300,150	393	354	+ 11	249	13	131	126,763	52,344,350	44,205,700	+ 18
Michigan	86	62	2	22	19,018	1,672,350	788	644	+ 22	512	59	217	227,655	12,930,000	10,332,100	+ 24
Montana	25	19	3	3	1,923	550,000	171	145	+ 18	128	16	27	10,874	5,108,950	4,589,700	+ 11
New Mexico	58	49	2	7	60,531	3,237,650	578	472	+ 22	521	25	32	733,247	32,588,100	21,340,000	+ 53
Oklahoma	208	152	11	45	68,313	18,255,500	2,491	2,372	+ 5	1,771	111	609	1,856,767	189,650,000	165,424,400	+ 15
Southeastern States	...	...	...	...	.....	.....	14	9	+ 56	.....	....	14	.....	.....	.....	.....
Alabama	...	...	...	...	.....	.....	1	2	— 50	.....	....	1	.....	.....	.....	.....
Florida	...	...	...	...	.....	.....	1	1	....	.....	....	1	.....	.....	.....	.....
Mississippi	...	...	...	...	.....	.....	11	6	+ 83	.....	....	11	.....	.....	.....	.....
Texas	1,243	984	33	226	1,755,240	45,425,250	12,457	10,214	+ 22	9,516	369	2,572	14,342,368	427,894,450	345,727,600	+ 24
East Texas Field	226	215	...	11	1,284,220	14,929,300	1,966	2,225	— 12	1,894	2	70	9,335,469	140,994,950	127,608,916	+ 10
Rest of East Texas	74	60	1	13	33,123	3,449,900	861	401	+115	737	30	94	456,732	35,650,950	22,437,684	+ 59
North Texas	160	100	1	59	18,923	2,295,850	1,921	1,757	+ 9	1,038	22	861	197,800	21,656,200	17,946,250	+ 21
South Texas	272	200	9	63	72,400	8,177,350	3,021	2,723	+ 11	2,122	100	799	844,332	†71,731,400	†24,365,950	+ 36
Texas Gulf Coast	133	103	6	24	49,807	6,475,850	1,283	937	+ 37	970	57	256	408,255	†61,967,050	†73,974,200	
Texas Panhandle	85	63	15	7	31,345	2,354,300	647	539	+ 20	494	127	26	246,000	23,444,100	18,573,550	+ 26
West Texas	266	228	1	37	264,460	6,676,250	* 2,411	1,241	+ 94	2,111	10	290	2,842,988	62,350,500	52,961,700	+ 18
West Central Texas	27	15	...	12	962	1,066,450	347	391	— 11	150	21	176	10,792	10,099,300	7,859,350	+ 28
Wyoming	7	4	1	2	7,296	1,821,650	86	72	+ 19	53	7	26	42,143	16,297,650	11,387,250	+ 43
Total United States	2,459	1,741	197	521	2,261,249	111,680,000	23,828	19,669	+21.1	16,570	1,986	5,272	20,129,315	1,061,520,850	894,068,979	+18.7

* October completions cover not the calendar month, but the four weeks, or 28 days, ended October 23.
† Fields of Corpus Christi district, now included with South Texas, were shown in Texas Gulf Coast in 1936.

The Standardization Program of the



fits snugly into the 32-year-old Frick-Reid Policy of handling

FRICK-REID SUPPLY CORPORATION

Pittsburgh, Pa. . . . . Tulsa, Okla.

Branch Stores in Old and New Fields — Equipment Suppliers Exclusively

WORLD DEVELOPMENT and TECHNOLOGY

Edited by
WM. V. GROSS, Associate Editor

High On Structure

Turner Valley well indicates sands rise toward west; 36 rigs active; field extended westward

TWO completions with an aggregate daily potential of more than 2100 barrels and announcement of four new tests featured the week's oil developments in the Turner Valley field of Alberta, Canada. A total of 36 tests are active in the area, with locations announced for four others.

Commoil Company's No. 1, Legal Subdivision 15, Section 29, Township 18, 2-w5, produced 1600 barrels a day steadily before tubing was run or acidization given. When these steps are taken, probably within two weeks, it is believed production will be materially increased, the unusually porous nature of the producing sands believed to indicate ready response to treatment.

Located far to the west of the largest producing wells, it stopped drilling at 7475 feet, 475 feet in the Madison limestone, indicating the producing formation makes a rise to the west. If the limestone had continued at the same angle former wells have indicated, the test would have had to drill another 400 feet to the producing zone. Production at the present depth indicates the limestone to be in a saucer-shaped formation, giving promise of heavy production well to the west of present producers.

Royal Crest Petroleums Ltd.'s No. 1, Legal Subdivision 9, Section 32, Township 18, 2-w5, supplied a west flank extension with an initial production of 525 barrels when bottomed at 7114 feet, or 458 feet in the Madison lime.

Both the Commoil and Royal Crest wells will be choked to 45 percent of potential in accordance with a proration order placed in effect November 1.

Plans Three Tests

West Flank Oil Company Ltd. will drill three new tests on the west side of an 80-acre holding in Section 32, on which the company is already drilling Nos. 1, 2 and 3. Cellars for the three tests are being dug and derricks are to be erected immediately.

To Drill on Taber

A syndicate comprised of drillers, contractors and general workers took preliminary steps to organize the Red Beam Oil Company last week for the purpose of making a test on the Taber structure. The group has leases on 800 acres, a string of cable tools and derrick. Drilling on No. 1 is expected to start within 60 days. It will be the first Alberta test by a group so organized. Cash capital, equipment and leases were formerly held individually by the 18 members of the syndicate.

On the Sage Creek structure of British Columbia, Columbia Oils has made 250 feet since resuming from 5800 feet a few weeks ago. If the weather does not get too severe and the snowfall excessive, work will be continued throughout the winter.

Other Alberta Wildcats

Following are reports from Alberta wildcat structures: On Birch Ridge, Elbow Oils Company, drilling at 5250 feet; on Cardston, Franco Oils, cleaning at 4580 feet; on Calling Valley, Anglo-Indian Oils Corporation, derrick; Sentinel Oils, drilling at 5902 feet; on Clearwater, Western Development Company, idle at 142 feet; on Del Bonita, Lyons-McIntyre, drilling at 450 feet; on Duncan, Spindletop Oils, drilling at 2392 feet; on High River-Aldersyde, Ranchmen's Oil Company, waiting at 7225 feet; on Highwood-Sinclair, Green Valley Petroleums' Banner 1, drilling at 4002 feet; on Hunter Valley, Hunter Valley Oil Company, testing at 8274 feet; on Kootenay Dome, Roxana Petroleums, drilling at 3655 feet; on Lethbridge, Lethbridge Petroleum & Refineries No. 1, cemented at 2198 feet; on Moose Dome, Moose Oils' No. 2, testing at 1553 feet; Model Oils, derrick; on New Valley, New Valley Oil Company, fishing at 8462 feet; on Pincher Creek, Weymarn Petroleums' No. 2, awaiting acid treatment at 6432 feet; on Ribstone, Dina Oil & Refining Company's No. 4, drilling at 1043 feet; London-Ribstone Petroleums' No. 2, testing with no depth reported; Blackfoot Ribstone Oils, location; on Steveville, Anaconda Oil Company, drilling at 1037 feet; on Taber, Plains Petroleum Corporation's No. 2, drilling at 3220 feet; No. 3, shut down for repairs at 2780 feet, Amerada Oil Company, hauling to location; on Wainwright, Altoba Oils, derrick; Battleview Oils, testing at 1894 feet; on Watson, Mar-Jon Oil Company's No. 3, changing from cable to rotary at 5530 feet; No. 5, erecting derrick; Mar-Jon-Maxmont Syndicate, drilling with no depth reported.

CANADA
Completions

Company, Well and Location	Init. Prod. Bbls	Depth
TURNER VALLEY—		
Model-Spooner-Reward Royalties, L. S. D. 4-28-18-2w5	600	6930
Share Royalties, L. S. D. 8-29-18-2w5	500	7308
Four Star Petroleums, L.S.D. 13-28-18-2w5	400	7002
Granville Oils, L.S.D. 16-29-18-2w5	350	7321
Davies Petroleums' No. 2, L. S. D. 13-21-18-2w5	2000	6955
Prairie Royalties, L. S. D. 16-17-18-2w5	670	7315
Commoil Company's No. 1, L. S. D. 15-29-18-2w5	1600	7475
Royal Crest Petroleums, Ltd.'s No. 1, L.S.D. 9-32-18-2w5	525	7114
TABER FIELD—		
Plains Petroleum Corp.'s No. 2, L. S. D. 9-25-9-17w4	250	3222

*Failures; †Junked; ¶Million cu. ft. gas.

Canada's 1937 production will double that of 1936

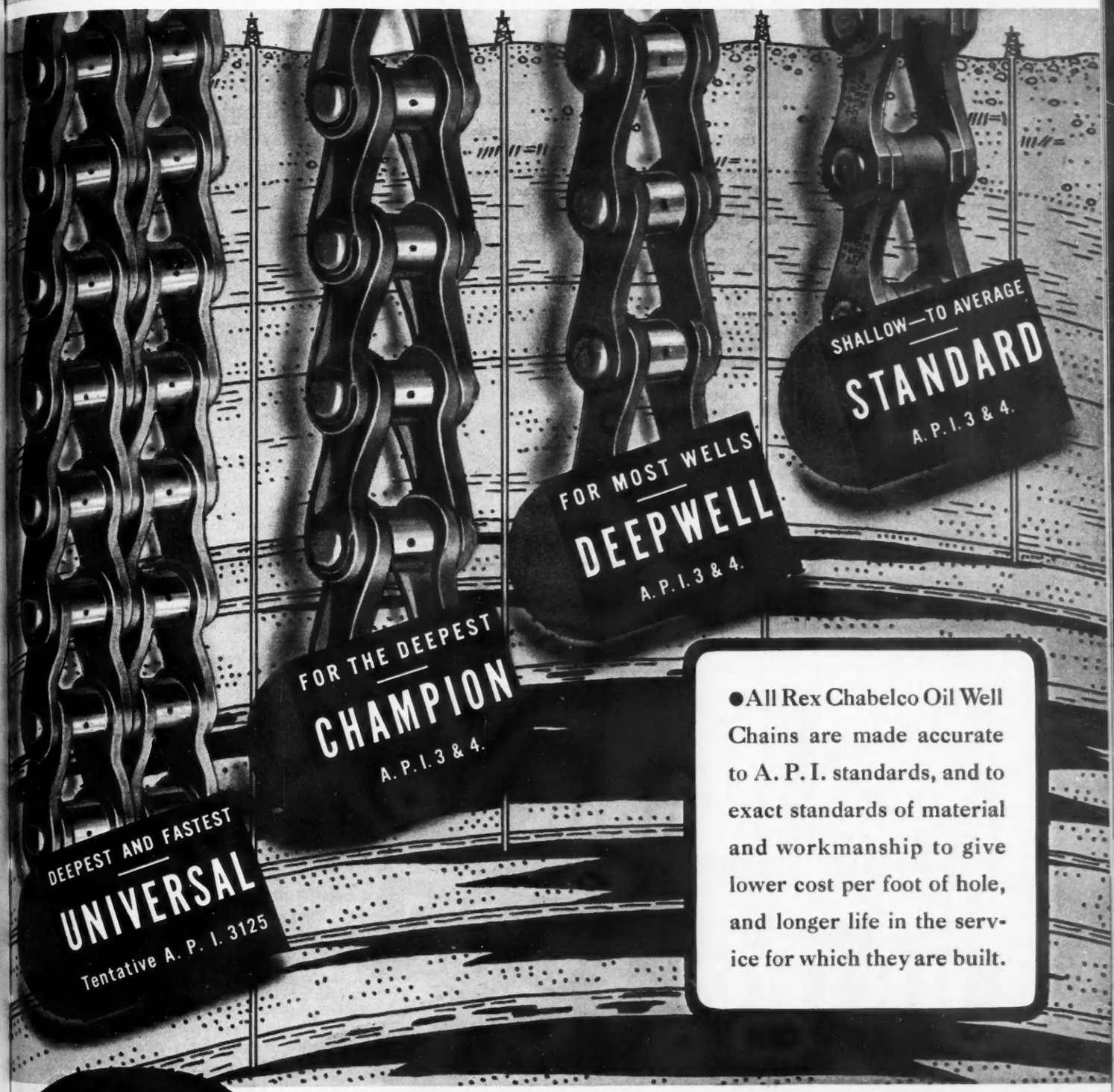
Despite proration which limited production of Turner Valley wells to 65 percent of potential for two-thirds of the month, Alberta oil production during September climbed to 281,154 barrels, an increase of 9256 barrels or 3.4 percent over the previous month. Of all production in the Canadian province during September, Turner Valley accounted for 278,652 barrels, or 99 percent.

During 1936, production was 1,320,442 barrels, compared to 1,749,615 barrels for the first 9 months of this year. Production this year, it is indicated, will approximately double that of 1936, which, in turn, was the record oil production year in the history of the province.

Official figures of the provincial department of lands and mines reveal that Davies Petroleums Ltd.'s No. 2, completed early in the month, was Alberta's largest producer. It yielded 37,829 barrels during the month.

HOW TO HANDLE IT

IF IT IS ANY TYPE OF A·P·I CHAIN



●All Rex Chabelco Oil Well Chains are made accurate to A. P. I. standards, and to exact standards of material and workmanship to give lower cost per foot of hole, and longer life in the service for which they are built.

REX CHABELCO

THE GREATEST CHAIN THAT EVER HIT THE OIL FIELDS

CHAIN BELT COMPANY *of Milwaukee*

SOLD FROM STOCK BY

MID-CONTINENT AND GULF COAST DISTRIBUTORS

Frick-Reid Supply Corporation
Lucey Products Corporation
Norvell-Wilder Supply Company
Rex Supply Company
Industrial Supply Company, Inc.
International Supply Company
Murray-Brooks Hardware Company, Ltd.
Coastal Supply Company
Dunigan Tool and Supply Company

EXPORT

Chain Belt Company, Chrysler Building, New York
Lucey Export Corporation, Woolworth Building, New York
William E. Knight, 2-3 Norfolk St., Strand, London, W. C. 2, England

May investigate cut in Turner Valley takings

An investigation of Canada's petroleum industry loomed last week with announcement of Hon. George H. Sedgewick, chairman of the Dominion tariff board, that an inquiry requested by the Petroleum Producers Association had been approved by Hon. C. A. Dunning, minister of finance. The association was organized when Imperial Oil Company and the British American Company, principal buyers of Turner Valley crude, instituted a buying program limiting proration takings to 65 percent of each well's potential. The announcement closely followed a reduction in the price of crude that was made this fall.

In answer to a request of Sedgewick, the association has outlined an investigation which will include prices, transportation costs and the "feasibility of increased duty" of crude and refined products imported from United States fields as a means of extending the market for Canadian crude.

A letter to Sedgewick by W. S. Campbell, chairman of the association committee named to investigate means of extending markets, outlined the scope of the inquiry as requested by the producers as follows:

"I desire to point out at the outset that our committee feels that the onus is upon the Imperial and the British American to justify to your board and to the producers, with some particularity, the reasons why it was felt necessary to take (a) a reduction in the field price of crude, and (b) a proration of the production of the wells under contract.

Outline of Inquiry

"The attempt which the companies will make to justify the reduction and the proration will at once lead your board into an investigation of many matters of vital interest to the crude oil producers, and to reply to the request contained in your telegram, we think we can do no better than to set out a number of the matters and questions with respect to which we think your board must make inquiry:

"(a) Field prices of crude and of naphtha in Turner Valley.

"(b) Field prices of crude in foreign fields shipping into Canada.

"(c) Transportation costs and transportation facilities of and for crude oil and naphtha from the wells to refinery points in Alberta.

"(d) Transportation costs and facilities of and for crude from wells in American fields to Canadian refinery points.

"(e) Imports of crude from American fields to all Canadian refinery points.

"(f) Transportation costs of refined products in Western Canada from Canadian refinery points, both eastern and western.

"(g) Transportation costs on refined products imported into Western Canada from United States points.

"(h) Feasibility of increased duty on refined products.

"(i) Feasibility of dumping duties at competitive points.

"(j) Factors entering into the extension of markets for the purpose of absorbing Turner Valley production."

Anglo-American to stop drilling English test

Anglo-American Oil Company recently decided to abandon its well in the vicinity of Hellingly, England, at 3506 feet. Observations which have been made in the course of drilling confirm those of D'Arcy Exploration Company at Portsdown and Henfields: that the porosity of the structure does not permit the accumulation of oil.

Drilling equipment of Anglo-American has been moved to Ecosse, about two miles south of Dalkeith, where the company has several small holdings. This new well will be known as Midlothian 1. It is approximately 100 meters from the well D'Arcy Exploration Company drilled during the government campaign in 1918 to 1922.

The well which is being drilled by D'Arcy Exploration Company at Kingsclere near Newbury, has reached 3185 feet. It penetrated the Jura at 3163. The well at Cousland, near Dalkeith, has reached a depth of 274 feet in the carbon formation.

MEXICO YIELD UP
Drilling results poor; only 7 permits granted

Production of crude oil in Mexico made something of a comeback from the general strike, with an output of 3,432,095 barrels in September, estimates the ministry of national economy. Production in the same month of last year was 3,768,855 barrels. The minstry rectifies August's production at 2,800,868 barrels.

However, but one well producing only 110 barrels daily, was the result of field work in Mexico in September, according to ministry of national economy reports. The well, Cuichapa 8, owned by the Richmond Petroleum Company, is in the Moloacan zone, Vera Cruz state. Five completions were recorded during the month, the remaining four being failures.

Only seven well drilling permits were granted in September by the ministry of national economy. They are: Mexican Petroleum Company, Chijol 135, Pedro 49 and Rincon 25, 26 and 27, all in the Panuco belt, Vera Cruz state, and Globe Petroleum Company, Globe 17 and 18, Quebrache fields, Alta Tampico, Vera Cruz.

MEXICO
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Aldamas y Bravo, S. A. Zacate 6, Zacate, Nuevo Leon	*	2256
New England Fuel Oil Co., Pazzi 38-A, Panuco, Vera Cruz	*	1950
Ninfa de la Garza vda de Navarro, Peyotes 1, Villa Union, Coahuila	*	2250
Richmond Pet. Co., Cuichapa 8, Moloacan, Vera Cruz	110	2225
Mar C. Blas, Rosa 4, Tamiahua, Vera Cruz	*	3250

*Failures; †Junked; ¶Million cu. ft. gas.

Rumanian gas question

The much discussed proposition of piping natural gas produced in the vicinity of Bucharest, Rumania, to industrial plants nearby is again holding the spotlight of industrial and gas circles in that country. Wood and coal are the current fuels.

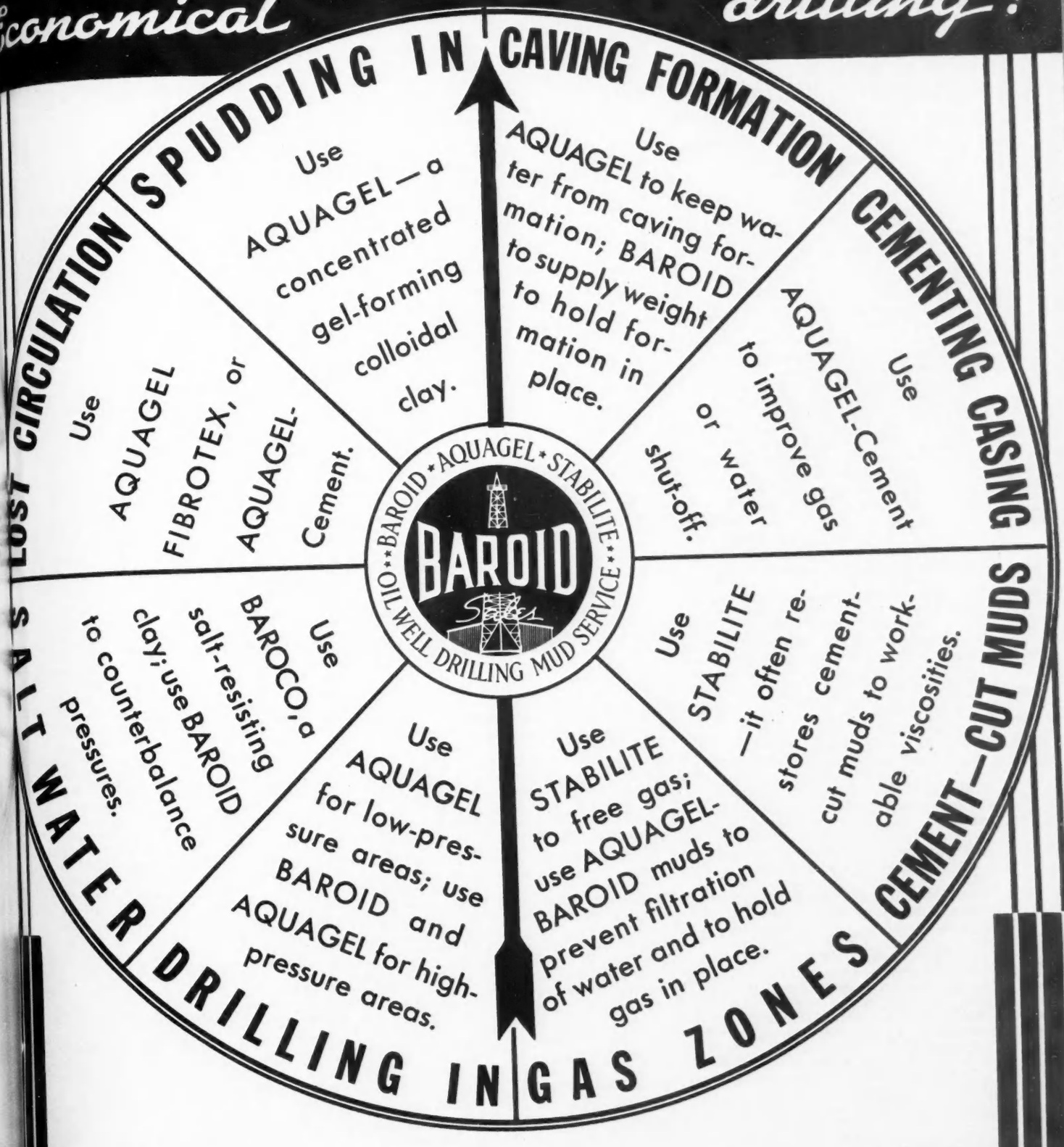
Small strike in Greece

Prospects of furnishing the smaller boats on Lake Van, Greece, with fuel are seen as a result of recent discovery of a small quantity of crude production in the Province of Van, according to reports originating in Pera. No announcement of additional exploratory or exploitation drilling has come from Pera since announcement of the discovery.

Distributed throughout the Mid-Continent and Gulf Coast by
BAROID PRODUCTS
(see opposite page)
BRIDGEPORT
For quick service on any quantity or any type of Drilling Mud, telephone the nearest Bridgeport Store, Office or Representative—day or night.
THE BRIDGEPORT MACHINE COMPANY
HOUSTON . DALLAS . SAN ANTONIO . CORPUS CHRISTI . ODESSA
SHREVEPORT . TULSA . OKLAHOMA CITY . WICHITA . and Branch Stores

BAROID PRODUCTS and SERVICE

point the way to Safer, Faster, more Economical drilling!


SPUDDING IN
Use AQUAGEL—a concentrated gel-forming colloidal clay.
CAVING FORMATION
Use AQUAGEL to keep water from caving formation; BAROID to supply weight to hold formation in place.
CEMENTING CASING
Use AQUAGEL-Cement to improve gas or water shut-off.
CEMENT—CUT MUDS
Use STABILITE—it often restores cement-cut muds to workable viscosities.
GAS ZONES
Use STABILITE to free gas; use AQUAGEL-BAROID muds to prevent filtration of water and to hold gas in place.
DRILLING IN
Use AQUAGEL for low-pressure areas; use BAROID and AQUAGEL for high-pressure areas.
SALT WATER
Use BAROCO, a salt-resisting clay; use BAROID to counterbalance pressures.
LOST CIRCULATION
Use AQUAGEL FIBROTEX, or AQUAGEL-Cement.
BAROID • AQUAGEL • STABILITE • OIL WELL DRILLING MUD SERVICE
BAROID
Sales

Stocks Carried and Service Engineers Available in all active Oil Fields.

BAROID SALES DEPARTMENT

NATIONAL PIGMENTS & CHEMICAL DIVISION OF
NATIONAL LEAD COMPANY
BAROID SALES OFFICES • LOS ANGELES • TULSA • HOUSTON

Courts

[*Continued from Page 12*]

code or with the federal oil administration are to be among the first group of 13 defense witnesses called when government attorneys complete presentation of their case. Subpoenas have been issued for: E. B. Swenson and J. W. Frey, Washington, D. C., former members of the petroleum administration board and now in the petroleum conservation bureau of the interior department; R. H. Winget, Cushing, Oklahoma, manager of Cushing Gasoline & Refining Company, who was described in government testimony as a refiner who attended a St. Louis meeting at which plans were discussed for major company purchases in the Mid-Continent field; C. A. Beroth, Chicago, president of Acme Petroleum Company, a broker who testified as a government witness early in the trial; J. A. Moffett, New York, former vice president of Socony-Vacuum Oil Company and described as a former Roosevelt representative on the P. and C. Committee; I. E. Lamp, Chicago, of Pure Oil Company and former secretary of the P. and C. Committee and now custodian of its records; Charles Fahy, Washington, former chairman of the Petroleum Administration Board and now general counsel for the National Labor Relations Board; G. R. Hopkins and A. H. Breakey, Washington, economists with the petroleum economics division of the U. S. Bureau of Mines; J. D. Collett, Fort Worth, of O'Keefe & Collett, independent producers, and president of the Mid-Continent Oil & Gas Association, and Wirt Franklin, Ardmore, Oklahoma, independent producer, both former chairmen of the P. and C. Committee; Roy B. Jones, Wichita Falls, Texas, president of Panhandle Refining Company.

Bought Only For Needs

Harold F. Parsons, East Lawrence, New Jersey, assistant to the vice president of Tide Water Associated Oil Company, failed to substantiate the government's charge that his company, with others similarly charged, made purchases in excess of requirements in an effort to boost spot market prices.

The company's purchases were made "to supplement the production of the company as required for sale purposes," Parsons testified. Declaring that the company also made purchases on the Gulf Coast during the same period, he added they were "not only for the reason that we needed gasoline, but also by purchasing in East Texas the company had the advantage of using its tank cars and securing a mileage allowance from the railroads, which amounted to an eighth of a cent a gallon."

In answer to a question of Chaffetz whether company's action was not also influenced by desire "to support the buying movement that was going on in East Texas in which other major companies were participating," the witness replied: "The company purchased because it required gasoline to supplement its stocks, and because we believe it was a good thing to take gasoline from East Texas to help stabilize the market."

In cross-examination by Donovan, government contention that purchases were made from independent refiners at "artificially high prices" was refuted. Asked whether any purchases were made above or below trade journal quotations, Parsons replied: "So far as I know all purchases were made below East Texas refinery prices. In April and May, when approximately 25 percent of the purchases for the entire year were made, the market was rising and our purchases were an eighth to a quarter of a cent under the low of the East Texas quotations, but when the level flattened out during the summer, practically all purchases were made at the low of East Texas prices."

Cross-examination also brought out that Tide Water's refinery had operated at full capacity for 10 years but was never able to care for requirements. In 1935, purchases of 1,150,000 barrels were necessary to meet demand, and in years immediately before period covered by indictment, purchases were larger than in 1935. In 1932 the company purchased four times as much gasoline than in 1935, Parsons said.

In further examination of Robert M. Cline, Tyler, secretary of the East Texas Refiners Marketing Association (see The Oil Weekly, November 1, page 14), the prosecution sought to link The Texas Company with the alleged East Texas buying program through conversations between Cline and Neil Buckley, Tulsa, field representative of Cities Service Export Oil Company, who had previously testified how he aided in obtaining major company buyers for distress gasoline of independent refiners.

A demand that Lewin be reprimanded for "inferring a conspiracy by innuendo on the basis of facts entirely legitimate" was entered by J. C. Denton, Mid-Continent Petroleum Corporation attorney, while S. A. L. Morgan, Texas Company attorney, declared that the only fact so far proven was that his company "bought oil in Texas," and asked the court: "Is that a crime, your honor?"

In answer to a question by Judge Stone whether Buckley ever told him The Texas Company would be a regular buyer, Cline said that the Cities Service official told him that The Texas Company needed gasoline for its stations in the territory and would buy gasoline in the East Texas field, but "that he did not think they would buy through the association."

In cross-examination by William J. Donovan, New York, chief of defense counsel, the witness testified that only 25 percent of the total gasoline independent refiners shipped out of East Texas during the first four months of 1936 was purchased by major oil companies, whereas the indictment charges that gasoline purchased by majors through the association amounted to more than 50 percent of all the independent refiners' output. Federal tender board records were introduced which showed that 12,000 carloads was shipped during the period, while Cline had testified that major company purchases totaled between 2500 and 2700 cars through his association.

It was also brought out that none of the officials of the marketing association, which allegedly was created in furtherance of the "conspiracy," were indicted. Cline declared the association is still selling gasoline to major companies as well as to other buyers.

John M. Bradshaw, Dallas commission buyer, on direct examination by the prosecution testified that major oil company purchases had an influence in the upward trend of prices in 1935 and 1936, and on cross-examination declared that such buying by major companies was not at all unusual and had taken place both before and after the alleged conspiracy. Bradshaw had been referred to previously as a "co-conspirator," although not indicted, and was called as a "reluctant" government witness.

Gulf Bought But Little

He denied testifying before the grand jury that a third of his purchases were made for Gulf Oil Company during the period covered by the indictment and estimated that about 15 percent of his purchases were made for the Gulf Company and that only 15 to 20 percent of these were made through the East Texas association. He also denied he testified that he received instructions from the Gulf Company to make purchases through the association, explaining that he testified that he didn't remember any Gulf official giving him such orders, but if there had been any such orders they would have been issued by C. H. Carlisle, Gulf buyer at Houston, or H. S. Gwin, his assistant.

When cross-examined by Donovan, Bradshaw said that the Connally Act, prohibiting interstate shipment of hot oil, had "considerable effect" upon the sources of supply of small plants set up overnight before the act became effective. The number of small plants and makeshift boilers dropped from 79 to about 12 or 15 when the tender boards started operations under the act, he said, adding: "They could no longer buy oil as they had been doing at 10 cents to 25 cents a barrel. A telegram to one of Bradshaw's customers in England was introduced to give further weight to the defense contention that factors other than the alleged buying program of major companies influenced the spot market price structure. The telegram stated that the Ethiopian war situation made refiners reluctant to quote prices. On later questioning by Crawford as to the length of the war, the witness answered: "We sold them a lot of oil."

Spacing rule decision

Last week the Texas Supreme Court handed down its decision in the Century case, that is, the case styled Railroad Commission et al vs. Magnolia Petroleum Company. The suit involved the right to drill one well on a tract of 1.6 acres which had been subdivided from another tract. The Magnolia Company attacked the permit and sought to set it aside. The case assumed unusual proportions because it was the second one involving spacing which has been decided by the Supreme Court, and attorneys had expected that it would carry some definition of broad policies

A Spark from a workman's shovel started it!

Our aluminum shovel would have prevented it!

Wherever there is shoveling around combustibles there is danger of sparks and fire. That's why more and more industries, faced with hazards such as this, are turning to special WOOD'S Aluminum Alloy Shovels and Scoops.

Unlike the ordinary steel blade, the aluminum blade on these WOOD'S Shovels will not produce a spark when brought into sharp contact with metal, stone or other materials. Moreover — this remarkable blade is acid-resisting, and unusually light in weight.

How about strength? A locomotive fireman, testing a WOOD'S Aluminum Alloy Scoop, used it three months shoveling 25 to 30 tons of coal a day. The blade wore back barely half an inch! Also, a coal mining company tested the shovel for five weeks. They reported the shovel showed no appreciable signs of wear, and production increased to an almost unbelievable amount!

It will pay you to get complete details about the WOOD'S Aluminum Alloy Shovels, the WOOD'S "Moly" Shovels (the famous shovels with Molybdenum Steel blades) and other famous WOOD'S brands. Just address THE WOOD SHOVEL AND TOOL COMPANY, PIQUA, OHIO.

WOOD'S ALUMINUM ALLOY SHOVELS

which the railroad commission would be required to follow in granting exceptions to the regular spacing rule.

The decision favored the commission, because the court found that the tract was entitled to an additional well when considering it as a part of the larger tract from which it had been segregated and found further that Magnolia Petroleum Company had failed in its duty to prove that the commission had acted arbitrarily in granting the permit.

The court did not outline the broad policies which some attorneys expected, but on the contrary held in effect that every spacing rule case must be settled finally on the facts peculiarly applicable to that particular permit. The court said in part:

"By its language the rule 37 is cast into two distinct parts. The fiirst deals with a spacing pattern for the entire field and for wells generally; the second with specific wells, to be drilled as exceptions to the general rule. These two parts compose the entire rule, the one as much as the other, and must be construed together. We interpret their legal effect to be this: An applicant for a permit to drill a well not included within the general terms of the first part of the rule, has the burden of showing a legal right thereto; having secured from the railroad commission an order granting a permit to drill, such order when issued is presumptively valid. It is made so by statute, and being an official act would be presumptively valid without a statute. 'All rulings of the railroad commission are presumed to be valid until the contrary is made to appear.' Brown vs. Humble, 87 S. W. 2d 1069. This presumption casts upon a litigant attacking it in court the burden of proof. Mere proof, as contended for by defendant in error, that the well in question was to be drilled upon a less acreage than ten, did not sufficiently prove the invalidity of the permit in question. The right to a well and the necessity of drilling for same upon a less acreage was the very purpose of the hearing before the commission, and presumptively that matter is foreclosed by its order until and unless the invalidity of same is thereafter made to appear."

Inspect California records

A trio of government agents have been detailed to the West Coast to inspect the books and records of the California oil companies, it was revealed November 3 by Attorney General Cummings.

Cummings announced that Herbert Borkland, M. L. Herberman and Henry McCleran have been assigned to the work, following receipt of promises of cooperation from a large majority of the companies in California.

The audit will be part of an investigation which is being made by the Department of Justice to determine whether there has been any violation of the consent decree of 1931 and, it was indicated, was undertaken as a result of suggestions made in a voluminous report submitted to Cummings last spring by the Federal Trade Commission.

The work will be preliminary to any further steps which the department may take, the attorney general said.

Conventions

[*Continued from Page 18*]

D. H. Gardner, Humble Oil & Refining Company, Houston; "The Application of Fourier Integral Analysis to Some Geophysical Problems," by W. T. Born and J. M. Kendall, Geophysical Research Corporation, Tulsa; "A Note on the Propagation of Seismic Waves," by Dr. Morris Muskat, Gulf Research & Development Corporation, Pittsburgh; "The Reflection of Elastic Waves From Transition Layers of Variable Velocity," by Alfred Wolf, Geophysical Research Corporation, Tulsa; "On the Stratigraphy and Tactics of Exploration for Petroleum, II," by E. E. Rosaire, Subterrex, Houston; "A Set of Curves to Assist in the Interpretation of the Three-Layer Resistivity Problem," by W. W. Wetzel and Howard V. McMurray, Humble Oil & Refining Company, Houston; "A Historical Review of Electrical Prospecting Methods," by W. M. Rust, Jr., Humble Oil & Refining Company, Houston; "Use of the Geo-Sonograph in Routine Exploration," by Curtis H. Johnson, Rieber Laboratory, Los Angeles; "Seismic Exploration in Eastern Venezuela," by W. R. Ransone, Geophysical Service, Inc., Dallas, Texas.

Association of Petroleum Equipment Suppliers meet

Announcement has been made by Wharton Weems, executive secretary, that the sessions of the American Petroleum Equipment Suppliers Association will be held coincident with the Eighteenth Annual Meeting of the Institute in the Stevens Hotel at Chicago.

Directors of the association will meet at 10 a.m., Monday, November 8, in Room 440-A, while the annual meeting will be held at 10 a.m., Tuesday, November 9, also in Room 440-A.

Hall of Science Plan for Tulsa Exposition

A Hall of Science is planned by the Scientific Committee of the Tenth International Petroleum Exposition for the May 14 to 21 Tulsa oil show, according to an announcement by W. G. Skelly, president of the Exposition.

Plans are being made by the committee to have the largest exhibit of scientific equipment of the petroleum industry ever displayed before at the Tulsa show. Three times the space heretofore provided is being allocated.

"Reservations for exhibit space for the May show are the largest ever made this far in advance of the opening date in the history of the Exposition. Already contracts have been sent to 186 firms representing 59 cities and 18 states, and inquiries for exhibit space would easily fill the 476 booths available in the 5 permanent exhibit buildings, for the next show," said Skelly.

The members of the Scientific and Technical Executive Committee include: Dr. C. K. Francis, petroleum technologist, of Tulsa, and chairman of the executive committee; Embye Kaye, vice president of Skelly Oil Company; W. A. Schlueter, president of Refinery Supply Company; L. S. Gregory of Gregory Company; B. W. Logue, chief chemist of The Texas Refinery; and R. L. Ginter of Ginter Chemical Laboratory.

NATIONAL TUBE Pipe
(see opposite page)
Distributed throughout the Mid-Continent and Gulf Coast by
BRIDGEPORT
For prompt out-of-stock or carload deliveries of National Tube Pipe of all kinds, phone the nearest Bridgeport representative—station to station.
THE BRIDGEPORT MACHINE COMPANY
HOUSTON . DALLAS . SAN ANTONIO . CORPUS CHRISTI . ODESSA
SHREVEPORT . TULSA . OKLAHOMA CITY . WICHITA . and Branch Stores

Buy YOUR FUTURE CASING PROFITS *Now*

THE wise operator keeps in mind the "long pull" for profits. He knows that short-cuts and chances can easily wreck the most promising outlook. He works accordingly, gives careful, thoughtful consideration to each step, scrutinizes every material used, large and small, weighing values, pondering ultimate life and economy.

Casing, the biggest single material expense of the well, comes in for extra close attention. Emergencies sometimes arise in running and cementing — leaky joints may develop — lack of uniformity in casing ends may cause loss of time and labor in make-up. These and other features will largely determine the ultimate profits from the well.

Take no chances — play safe, specify NATIONAL Seamless. Pierced from solid steel, uniform wall-strength is assured. It cannot split at any place along a weld a mile or more down; it has no welds. Carefully finished ends mean that it stabs easily, screws together smoothly and accurately. In your next well, buy your future casing profits now, be sure to specify NATIONAL Seamless A. P. I., Diamond B X and B 8,

America's Preferred Casing, made by the world's largest manufacturer of steel pipe and tubes.

NATIONAL
Seamless Casing

X A.P.I. 8

NATIONAL TUBE COMPANY

PITTSBURGH, PA.

United States Steel Products Company, New York, *Export Distributors*

UNITED STATES STEEL

IN THE

Financial Field

Failure of oil shares to maintain exceptional popularity may indicate true strength.

* * *

Executives feel basic conditions are still sound and some issue cheerful statements.

THE failure of oil company shares lately to maintain the exceptional popularity that they previously experienced may reflect a growing conviction that oil companies, as well as other concerns, probably would be unable to escape the effects of a serious recession in business.

The action of the stock market itself, as well as various business statistics, indicates very strongly, of course, that business activity in general may be reduced materially in the months ahead. If this trade lull should prove as serious as some fear that it may, then it appears quite possible that the oil industry in the future may suffer from contraction of business volumes.

If the consumption of petroleum products should taper off, such a reduction would represent a marked contrast with the past and present conditions. For several years now, the oil industry has been enjoying a steady expansion of consumption of its products. If that upward trend should be reversed, the earnings of the oil companies would be cut down, not only by the lower volumes of business, but also, perhaps, by less stable markets for petroleum products and resultant reductions of prices.

Decline Cause Debated

Debate continues as to whether the present recession of business represents merely an interruption of the upward movement or the beginning of a major depression.

On the one hand, the action of the stock market, presumably reflecting a consensus of informed opinion, has led many to believe that the present recession may prove considerably more serious than was at first considered likely.

On the other hand, recent weeks have brought additional reassurance from prominent business men and government officials, who have indicated the opinion that the present let-down is only temporary and that it will be followed presently by a resumption of the basic upward movement.

Hopefulness Indicated

In line with the latter view was the conclusion reached recently through a survey by Shields & Company. According to that survey, business executives are disturbed over present conditions, but they generally feel that basic conditions still are sound and that industry has not yet reached the beginning of a major downward phase of the business cycle. According to the survey, the business men look upon the present recession in industrial activity as a period of digestion of inventories.

Within recent weeks, cheerful statements have been issued by various prominent men, including Jesse H. Jones, chairman of the Reconstruction Finance Corporation; Roger W. Babson, well known economist; General Charles G. Dawes, former Vice President of the United States; Lewis H. Brown, head of Johns-Manville Corporation; William S. Knudsen, president of General Motors Corporation; and others. All of these men are inclined to believe that the break in the stock market probably foreshadows only a temporary recession of business rather than another major depression.

A similar opinion was expressed more recently by Colonel Leonard P. Ayres, vice president of Cleveland Trust Company, who indicated that he still believed 1938 business will be better than that of 1937. Although he expressed the opinion that business declines at present under way will not develop into a depression, Ayres conceded that the stock market decline has become mystifying, and that the decline in security prices may have resulted in part from the artificial conditions that have been set up through government interference in economic affairs.

Government Policies Deprecated

A similar opinion to that of Colonel Ayres was expressed by Winthrop W. Aldrich, chairman of the Chase National Bank, New York. Aldrich asserted that the stock market break has not resulted from the present business conditions or from foreign selling of securities, but from impairment of the efficiency of the stock market machinery. This weakening of the stock market machinery has resulted, he said, from various governmental policies. He cited, as harmful, various restrictions now imposed on the markets for securities and also present tax policies that he described as discouraging or handicapping business.

In the meantime, some of the comments on present conditions and the present outlook shade off into darker colors. For example, Joseph E. Pogue, petroleum economist and an official of a New York bank, recently stated that the country is at present facing a depression of undeterminable magnitude, but possibly of moderate proportions. He predicted that industrial activity in 1938 would not be more than 10 percent lower than that of 1937. He warned the petroleum industry that production of petroleum in 1938 should be lower than in 1937, but he conceded that gasoline consumption next year would perhaps show an increase of about 5 percent over this year.

Atlantic's Earnings Up

Several oil companies already have issued financial reports on their earnings for the third quarter of this year and for the first 9 months of the year. And numerous other companies are expected to issue similar reports within the next few weeks.

The Atlantic Refining Company and subsidiary companies report a profit of $7,486,000 for the first nine months of 1937, which compares with a profit of $6,161,000 for the same period of 1936, an increase of 21 percent. Both figures are after interest, depreciation, taxes, etc. No provision has been made for any surtax on undistributed profits in either period.

After provision for dividends on preferred stock, the profit per share on common stock for the first nine months of 1937 was $2.64 as compared with $2.20 for the corresponding period of 1936.

Big Gain for Union

Union Oil Company of California so far this year has shown earnings about twice as great as those of last year. The company, for the first 9 months of 1937, has reported net profit of $8,850,000, after usual deductions, equivalent to $1.90 a share on the capital stock. This was the largest net profit for the first 9 months since 1929. It compared with a net profit of $4,400,000, or $1 a share for the first 9 months of 1936.

For the third quarter of this year, however, Union Oil Company showed a less pronounced improvement over last year. In the 3 months ended September 30, the company reported a net profit of $3,650,000, or 78 cents a share, compared with $3,000,000, or 64 cents a share in the preceding quarter, and with $2,400,000, or 55 cents a share in the September quarter of last year.

L. P. St. Clair, president of Union Oil Company, explained that the better showing this year has resulted from better prices and larger volumes of business, and has occurred despite larger payrolls and larger material costs.

North Central Texas

North Central Texas Oil Company is showing, this year, about 75 percent better earning power than last year. In 1936, the company reported a net profit of $69,752, after usual charges. For the 9 months ended September 30, it is estimated that the company earned a profit of $92,964, compared with $56,346 in the corresponding period last year. For the 3 months ended September 30, 1937, the company showed an estimated net profit, before federal income taxes, of $35,106, compared with $21,899 for the similar quarter last year.

Other Industries Prosper

Favorable earning reports for the third quarter of this year are not confined to the petroleum industry. The first 22 industrial companies reporting on operations in the 3 months ended September 30, this year, showed for the period net profit approximately 32 percent larger than in the similar period last year.

[Continued from Page 13]

Turner Valley producers prorated to 45 percent

Steadily mounting production with completion of large producers and successful acid treatment given older wells in the Turner Valley field of Alberta, Canada, has brought the second proration order in as many months. Production is now limited to 45 percent of potential, a marked decrease from the 65 percent order inaugurated by buying companies on September 11. The new order became effective November 1.

Inability of existing pipe line facilities to handle production and the inability of existing markets available to Alberta producers to absorb the crude brought the second proration order. Opposition of producers to the first order resulted in an announcement from Imperial Oil Company, Ltd., one of the two principal buyers in the Turner Valley field, that purchases of Montana crude would be stopped October 1. The British American Oil Company, Ltd., the other buyer, is understood to have contracts with United States producers calling for small purchases still in effect.

Completion of 11 wells since the first order became effective less than two months ago, along with acidization that boosted production of several previously completed producers, brought daily production from the Turner Valley field to a figure higher than when the order became effective. Valley wells were producing about 12,000 barrels daily early in September, which was cut to 8000 barrels by the 65 percent order. Since then, the potential has risen to between 18,000 and 19,000 barrels, amounting to 12,500 barrels under 65 percent proration. The order which became effective last week again brings the figure near the 8000-barrel mark.

Capacity of Royalite Oil Company Ltd.'s gathering lines, which are fed into Imperial facilities, is being boosted to 10,000 barrels daily, with additional improvements being made, that by January 1, 1938, will enable the company to handle 13,000 barrels.

Indiana board issues drilling regulations

The Indiana Board of Public Works last week issued oil and gas drilling regulations to become effective November 15. The regulations, it was pointed out, "are not an attempt to hinder in any way the development of the oil and gas resources in Indiana, but are intended to aid this department in keeping a closer check on development throughout the state." V. M. Simmons, administrative officer of the department, has been charged with enforcing the regulations, which provide that:

Permits be obtained from the Department of Conservation before new wells are started or deepening operations at an old well undertaken if six months have elapsed since issuance of the original permit. Applications for permits, which are to be issued without charge, shall give the name and location of the well, names and addresses of lessee and drilling contractor, date actual drilling is proposed to start, intended depth of the well, and, if known, elevation of the mouth of the proposed well above sea level. Accurate logs shall be kept of all wells, copies of which are to be filed with the Department of Conservation within 30 days after completion of the well; logs and other information, upon request of the permittee, are to be kept confidential for a period of 90 days after completion of the well. Abandoned holes shall be plugged in the presence of and under the supervision of a representative of the Department of Conservation. Operators shall be permitted "to introduce air, gas, water or other liquid" into wells for the purpose of recovering oil or gas, provided that the introduction of such pressure "shall be through casing or tubing, which shall be anchored and packed so that no other oil, gas or fresh water bearing rock above or below shall be affected by the introduction of such pressure."

The act under which the regulations were established provides a penalty of from $10 to $300 fine and/or imprisonment for not less than 30 days or more than 6 months.

Texas tank bottom order

The Texas Railroad Commission has issued a new order governing the disposition of tank bottoms in the East Texas field. It became effective as of October 29, and was intended to meet objections of treating plant operators who recently enjoined the order in Federal Court at Tyler.

The order provides that before any tank bottom can be moved, at least two guages which check must be had on each tank, and a sample of the tank bottom must be furnished to the commission. All "merchantable" crude must be charged back against the well allowable, and application for the cleaning must be filed with the commission on a new form which the commission has provided. A complete set of new regulations governing the operation of treating plants is included in the order.

It is possible, however, that the new rule will not meet the court decision in that it is still possible to burn tank bottoms and not charge the oil against the allowable.

Texas field hearings

Difficulties encountered in completing wells in the Aransas Pass field, Aransas and San Patricio counties, was discussed at a hearing before the Texas Railroad Commission last week. The hearing was called to include in the official record results of potential tests of each well.

The commission had made the tests and found that average potentials were far lower than those reported by operators. When these were presented at the hearing, however, the operators indicated by their silence that the commission's finding would be satisfactory and that they would be used as a basis for fixing allowables from November 1, forward.

Testimony offered at the hearing showed that the sand which is produced from 7100 feet is in some wells less than four feet thick and that these sands carry both oil and gas throughout the section. Engineers indicated that this condition was the cause of the high gas/oil ratios encountered in some wells, since they found it impractical to complete wells low enough in the sand to shut off the gas entirely.

The commission was advised that Warren Petroleum Company plans to construct a gasoline plant in the field which will be capable of processing 75,000,000 feet of gas daily. Wells now drilled in the field are producing about 90,000,000 feet per day. The company plans to sell residue gas to local manufacturing plants and attempt to obtain a permit for a carbon black plant for burning any gas which cannot be sold for manufacturing purposes.

Twenty-acre spacing for wells in the Luby field, Nueces County, was requested at a hearing before the Railroad Commission last week. This plan was advocated by Humble Oil & Refining Company, Ohio Oil Company, Stanolind Oil & Gas Company, Sun Oil Company, and Seaboard Oil Company.

A. C. Erwin, representing Richardson Petroleum Company, objected to the 20-acre rule, although his tracts were outside that area which the Seaboard estimated would be productive. The operators also requested that the commission require 1100 or 1200 feet of surface casing cemented to the surface and an oil string cemented 800 feet above the shoe.

Most of the operators favored straight acreage proration, but Ohio Oil Company asked that the commission fix allowables on acreage times potential, with 50 percent on each factor.

The Luby field was brought in on May 24, 1937, and it is located just north of the Kleberg-Nueces County line in the Petronilla Ranch. Production is found at —5030 feet and the average sand thickness is 20 feet.

Some of the wells have as much as 45 feet of producing formation of which 75 percent is clean sand. The gas/oil contact is between —5005 and —5010. The water-oil contact has been determined at —5030 to —5035 feet. The operators estimate that there will be a field which will include 3000 productive acres. The oil produced is of 49 gravity and as much as 8000 feet of gas per barrel of oil is produced from some wells. The average bottom hole pressure is 2280 pounds and the gas/oil ratios in most wells vary from 1000/1 upward.

The Texas Railroad Commission has called a hearing on the Talco field to be held at Mount Pleasant, Texas, on November 18.

Carbon black rule revised

The Texas Railroad Commission has abrogated, effective January 1, 1938, its rule governing permits for carbon black plants.

The old Rule 41 was ordered stricken out entirely and the commission announced that between December 1 and January 1 orders will be based upon the new rule which is, in effect, the regulations provided in the statute known as House Bill 266. Thereafter permits must be obtained annually.

It should be noted that the old Rule 41 will remain in effect until January, but meanwhile operators must prepare to operate under the new order by filing certain forms during this interval.

OKLAHOMA FIELDS

Billings, Cement and North Earlsboro extended.

* * *

Important tests reach decisive depths.

Tulsa.—Slight extensions to the Billings, Cement and North Earlsboro fields were the most important Oklahoma happenings last week. Meanwhile, a number of important tests in scattered areas had reached important stages.

The Billings extension was Lincoln Petroleum Company and Rudco Oil Company's O'Neil 3, SE NW SE 16-23n-2w, which flowed 1313 barrels of oil in four hours while laying down drill pipe. Top of the Wilcox sand was 4260 feet and at 4268 feet production started. Gas was gauged at 8,000,000 cubic feet a day. It extends the pool one location northeast. Cellar is being dug for the company's O'Neil 4, NE NW SE 16-23n-2w, a north offset to the new producer.

Another producer for the pool was Continental Oil Company's Conway 12, SW SE SW 16-23n-2w, which averaged 400 barrels of oil per hour while pulling drill pipe at 4293 feet in the Silcox sand. It found top of the sand at 4266 feet.

Potential was started on Continental's Conway 11, SE NW NW 21-23n-2w, which flowed 174 barrels of oil and 161 barrels of water during the first six hours of the test. Continental made location for a west flank test at Conway 13, NW SE SW 16-23n-2w. The new test is a west offset to Conway 9 and a north offset to Conway 12, both producers.

Phillips Petroleum Company and Shell Petroleum Corporation's O'Neil 6, NW SE SW 16-23n-2w, made a potential of 3658 barrels of oil, producing from 4302 feet in the Wilcox sand. Tide Water Associated Oil Company's Derr 1, SEc NW 16-23n-2w, was bailing mud and preparing to swab from the plug-back total depth of 4345 feet.

Langston Operations

Eason Oil Company's Smith 2, NWc 13-17n-1w, started producing last week, making it the second producer for the discovery lease in the extension area of the Langston pool of Logan County. The well was washed in through tubing from 5119 feet in Wilcox sand. It made a 24-hour potential of 1057 barrels of oil through tubing and 1,200,000 cubic feet of gas. The well was shot with 80 quarts between 5080 and 5115 feet and acidized, but would not flow. After 2½-inch tubing was set at 5030 feet the well flowed 256 barrels of oil in five hours through a one-inch choke.

Two wells nearby were beginning important operations. Sinclair Prairie Oil Company's Smith 1, NW SW SE 12-17n-1w, topped the first Wilcox sand at 5042 feet and was coring at 5056 feet. Stanolind Oil & Gas Company and Amerada Petroleum Corporation's Fouts 3, NEc 14-17n-1w, was unloading the hole to test. It had Simpson dense at 5020 feet; Simpson dolomite at 5060 feet and Wilcox sand from 5082 to 5140 feet. Later reports stated the well had swabbed and flowed 110 barrels of oil in 14 hours but lost swab in the hole and was fishing.

New Start at Crisman

Carter Oil Company was completing derrick for Barclay 1, CE/2 SE NE 17-25n-3w, west of the discovery producer of what many oil men think will be Oklahoma's next major oil pool, in Grant County. Discovery well was Carter Oil Company et al's Crisman 1 CW/2 SW NW 16-25n-3w, producing from 5410 feet in Wilcox sand.

Ohio Oil Company was swabbing at Dahl 15, SE NE SE 31-14n-3w, at the east edge of the Edmond pool in Oklahoma County. It was given two shots, a total of 78 quarts between 6638 and 6702 feet and was at a total depth of 6710 feet in Wilcox sand. Ohio's Rankin 4, SW SE SW 31-14n-3w, was to test at 6660 feet where it was kicking off with high pressure gas and showing for a small producer.

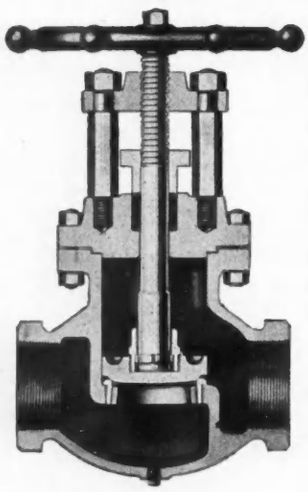
Cement Is Extended

Finding a rich sand body between 5081 and 5107 feet, Ray Stephens, Incorporated's Funk 1, SWc SE 1-4n-9w, extended the Cement pool of Caddo County one location east, the hole filling with oil after plugs were drilled. Bailing did not lower the fluid below 2200 feet and it was shut in for tankage. Nine-inch casing

Index to Field Development News

Area	Page
Arkansas	111
California	114
Eastern States	112
Kansas	90
Louisiana Coast	106
North Louisiana	108
Michigan	116
New Mexico	92
Oklahoma	86
Rocky Mountains	116
Southeastern States	111
East Texas	99
Texas Gulf Coast	104
West and North Texas	94
Southwest Texas	100
Wildcat Drilling Report	118

FOR OIL FIELD BOILERS
CAST STEEL STOP VALVES
3" & 4" Globe and Angle For 350 lb. ssp at 580 F



No. 6528—Globe

SCREWED OR FLANGED ENDS, FLANGED BONNET, O. S. & Y.

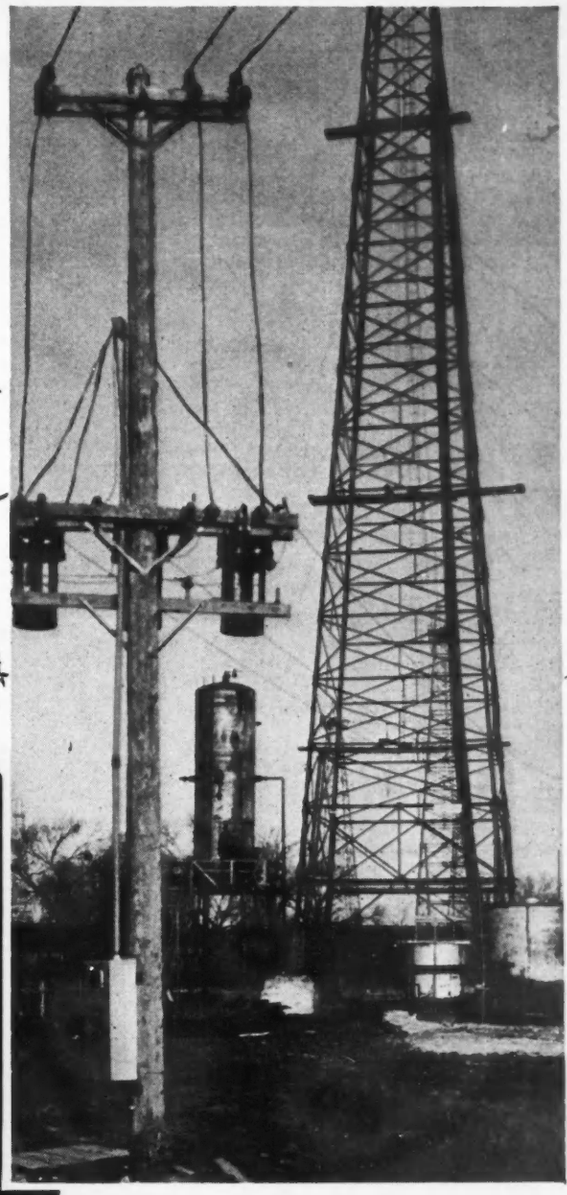
No. 6528—Globe, cast carbon steel body and bonnet, EValloy swivel plug seat and disk.
No. 6529—Angle, cast carbon steel body and bonnet, EValloy swivel plug seat and disk.

Basic rating.....300 lb. ssp at 750° F. Use Edward No. 2688 or 2698 for sizes 2" and below.

These screwed end, cast steel stop valves meet standard specifications for 300 lb. ssp at 750° F. or 350 lb. ssp at 580° F. Full area. Remarkably compact.

MAINTENANCE ENGINEERING CORPORATION
3611 Clinton Drive. Telephone P. 3135, L. D. 409 Houston, Texas

Over 50,000 BARRELS OF OIL DAILY



... pumped with

PURCHASED ELECTRIC POWER . . .

IN OKLAHOMA CITY FIELDS

Result:

MORE PRODUCTION AT LESS COST . . .

50,000 barrels per day or about 1/3 of the total production in the Oklahoma City field is being produced with Purchased Electric Power.

An accurate survey of almost 200 wells serviced with Electric Power by the Oklahoma Gas and Electric Company reveals that the average lifting cost over a long period of time amounts to only 2c to 3c per barrel.

This low pumping cost is augmented by a low installation cost, extreme portability and greater salvage value of Electrically Powered Equipment. Purchased Electric Power is more efficient and the cost is less!

PROFIT! BY USING Purchased ELECTRIC POWER

GREETINGS

A. P. I.

OKLAHOMA GAS AND ELECTRIC COMPANY

Commercial Department

OKLAHOMA CITY — W. H. STUEVE — OKLAHOMA

was cemented at 5081 feet. The well was reported showing strong gas pressure.

Although Oklahoma's fourth deepest test continues to report rather poor showings, it is at least arousing the interest of operators with tests in the immediate area. The well is Coline Oil Company's Johnson 1, SW SE NE 1-2n-8w, in the Marlow area of Stephens County, fourth test in the state to go to 10,000 feet. It was washed with oil after plugging back to 9164 feet with 7-inch casing set at around 8970 feet, but had no show. Late reports state the well swabbed for eight hours and recovered water and the 75-barrel oil load. Operators reported a trickle of oil coming through the tubing before the swabbing test was begun.

Ed Parsons et al's Blake 1, CSW NW 22-2n-8w, found fairly well saturated sand between 5240 and 5259 feet and twice made attempts to take a drill stem test. Both were failures and operators reconditioned the hole and took a third test with packer set at 5145 feet. Opened for 30 minutes, it showed 180 feet of salt water and 90 feet of mud with an odor of oil and gas. It was drilling ahead at 5255 feet in shale.

Negotiations were reported underway to deepen Jones & Shelburne's Pfile 1, SWc 1-2s-7w, near Comanche, which has been shut down at 3500 feet for several weeks. Both The Texas Company and Gulf Corporation are said to be buying acreage in the area.

Meanwhile, interesting developments were taking place in the newly revived Fox pool of Carter County. Gulf Oil Corporation's Smith Estate 1, CSW SW 26-2s-3w, topped the McLish sand at 7225 feet. A core from 7329 to 7344 feet had a two-foot recovery consisting of gray limestone at the top and brown shale with streaks of lime at the bottom. Another core was to be taken from 7344 to 7354 feet. Comparisons show the McLish was found 297 feet higher than in Carter Oil Company's Ruth Williams 1, in Section 27-2s-3w, discovery well of the deep Oolitic pay. Gulf Oil Corporation's Johnson 1, CSW NW 27-2s-3w, was drilling ahead below 7762 feet in shale and lime, still in the Simpson series.

Carter Oil Company's Carter-Harley 1, CNW NW 19-2s-3w, east offset to Carter et al's Harley Community 1, was drilling ahead below 4215 feet in shale.

Indian Territory Illuminating Oil Company's Dome-Bo 1, CNE SE 29-6n-10w, in the Cement area of Caddo County, plugged back to 5237 feet because of a crooked hole, but was last reported drilling ahead below 5141 feet.

Carter Oil Company was plugging Carter-Kerns 1, SW NE SE 21-3n-5w, located in the Knox pool of Grady County. Drilled to 2554 feet, the well was plugged back to 2290 feet but had no show.

Southwest of the old Wheeler pool of Carter County, Lloyd Noble Drilling Company et al's Revelle 1, CSW SE 32-3s-2w, was rigging up to spud. The test will be drilled to between 4000 and 4500 feet. On a 2000-acre block, the venture is in an area where wells have drilled to an average depth of 2700 feet thus far.

Jesse Defined to South

South end of the Jesse pool apparently has been defined and an extension was noted for the North Earlsboro pool of Seminole County.

Continental Oil Company's E. Brown 1, NEc NW 11-1n-7e, at the south end of the Jesse pool, flowed 115 barrels of oil, gross, after plugging back and perforating casing, then went dead. Drilled to 4616 feet, the test was plugged back to 4316 feet and casing perforated between 3859 and 3908 feet. Following this the test was shot with 50 quarts between 4143 and 4157 feet and acidized with 3000 gallons. The flow followed.

North Earlsboro Extended

In Seminole County, Sun Oil Company's Letka 1, SE NW SW 35-11n-5e, extended the North Earlsboro pool one location northwest. It had the Wilcox sand from 4590 to 4600 feet and while cleaning out, flowed 145 barrels of oil in 19 hours, then refilled 1500 feet with oil. With the hole at a total depth of 4602 feet, operators ran tubing and put the well on pump. During the first 12 hours of the test the well made 135 barrels of oil and pumped only 125 barrels during the following 24 hours. Rods were being pulled in order to make a check of pumping equipment.

C. L. Carlock et al's Young 1, CN/2 NW NW 23-15n-5e, four miles north of Davenport in Lincoln County, topped the Skinner sand at 3691 feet and cored to below 3695 feet after getting good showings of oil. The test was shut down for water at 3880 feet, reporting only a very small show of oil at that depth. Top of the Peru sand was at 3422 feet and some saturation was found in a core of the formation from 3428 to 3440 feet.

Four miles north of Konawa in Seminole County, an interesting wildcat is being started at W. B. Osborne's Harris 1-A, NWc 11-6n-5e. The test is 100 feet north of a dry hole which went to a total depth of 4352 feet in Wilcox sand, drilled about seven years ago. Between 2950 and 2980 feet, the old test had Earlsboro sand with fair saturation. The new test is on a 500-acre block assembled by Osborne.

East of the Konowa pool, Atlantic Refining Company's Dameron 1, NEc NW 22-6n-6e, topped the Simpson dense at 3500 feet; topped the dolomite at 3539 feet where the hole filled with oil. At 3582 feet it had a hole full of oil and was shut down while building tanks.

South of Konawa, Stanolind Oil & Gas Company, Amerada Petroleum Corporation and Mid-Continent Petroleum Corporation's Salina 1, SE NE NW 4-5n-6e, was plugging back to 3185 feet to perforate casing and retest the Hunton lime. During previous tests, the well was drilled

OKLAHOMA

Completions

Company, Well and Location	Init Prod. Bbls.	Depth
CADDO COUNTY—		
Ohio Oil Co., Lackey 8, se ne nw 11-5n-9w	440	3941
CARTER COUNTY—		
Magnolia, Richards 73, sw se sw 31-3s-3w	55	1178
S. & D. Daube, R. Isabell 8, se c se se 22-4s-2w (pb 2235)	6	2285
Fee 30, sw sw se 14-4s-3w	10	1307
Carter Oil Co., Carter-Kearn 1, sw ne se 21-3n-5w (pb 2157)	*	2555
CLEVELAND COUNTY—		
Sinclair Prairie et al, Rice 3, sw ne ne 28-10n-2w (pb 7285)	200	7293
COAL COUNTY—		
Continental, Clelland 2, se nw ne 26-1n-8e	18	755
CREEK COUNTY—		
Anthony, Berryhill 2, sw nw nw 4-16n-12e	*	2120
A. W. Swift et al, Hayden 2, ne sw sw 12-19n-9e	25	1172
GARVIN COUNTY—		
Cox & Hamon, Perry 2, sw se sw 32-1n-3w	70	3345
HUGHES COUNTY—		
E. H. Moore, Busch 1, nw sw sw 21-8n-10e	*	4456
Amerada, Stewart 3, sw sw nw 31-9n-9e	275	3991
JACKSON COUNTY—		
Gulf Oil Corp., O'Neil 1, nw nw sw 5-1s-19w (pb 2581)	46	2635
JEFFERSON COUNTY—		
Bridwell Oil Co., Wohlgemuth 18, ne ne se sw 30-6s-5w	204	1898
Circle Oil Co., Seay 57, nw se se sw 3-7s-5w	40	1118
Bridwell Oil Co., W. D. Seay 3, nw nw ne 10-7s-5w	30	1093
Tri-State Oil Co., Smart 1, ne ne nw 13-7s-6w	*	2265
LATIMER COUNTY—		
La Flore G. & E. Weakley 24, cn½ s½ 3-6n-22e	¶25	1689
LINCOLN COUNTY—		
Ardie Oil Co., School Land 1, ne ne se 16-14n-4e	*	5015
LOGAN COUNTY—		
Champlin Ref. Co., Pfeiffer 8, ne se nw 4-19n-2w	1291	5100
Champlin Ref. Co., Pfeiffer 9, se nw nw 4-19n-2w	2709	5048
MUSKOGEE COUNTY—		
Butler et al, James 11, nw se se 18-14n-17e	*	1480
L. C. Butler, James 12, ne se se 18-14n-17e	*	1925
MURRAY COUNTY—		
Power Oil et al, Lancaster Trust 1, sw sw ne 10-1s-2e	*	4404
NOBLE COUNTY—		
Seaboard Western et al, Guthrie 1, nw nw ne 6-20n-2w	165	5453
OKFUSKEE COUNTY—		
Grimes, Wind 2A, se ne ne 35-11n-9e	12	1478
F. W. Merrick, Mackey 1, ne ne sw 29-11n-10e	*	4062
Panther, Smith 6A, w½ ne ne 11-11n-11e	2	1235
OKMULGEE COUNTY—		
Lease Inv. et al, Johnson 1, nw ne sw 4-13n-11e (pb 3188)	97	3191
E. H. Moore, Townsend 1, ne ne se 5-13n-11e	*	3224
NOBLE COUNTY—		
Tide Water Oil Co., Folke 3, nw ne ne 28-23n-2w	2424	4333
OSAGE COUNTY—		
Simons & Stoner Bros. 3, sw se sw 6-21n-9e	7	2180
Oklahoma Nat. Gas, 1933, se se nw 20-22n-12e	*	2088
Opal Twyman, 6, nw se sw 20-23n-11e	*	1785
Lewis Prod. Co., 9, sw ne sw ne 33-24n-7e	117	2662
Midco Oil Corp., 3, se ne sw 35-27n-7e	2	2645
PAWNEE COUNTY—		
O. H. P. Thomas, Bush 7, ne ne ne sw 8-20n-10e	30	1880
PONTOTOC COUNTY—		
Carter, L. Brown 2, ne se se 25-2n-6e (pb 3550)	1069	4280
Crusaders, Norris 3, ne nw ne 25-2n-6e	310	4003
B. Morin 1, se se se 20-2n-7e	44	2660
Magnolia, Morin 5, sw nw se 20-2n-7e	819	4095
Simpson 22, nw ne ne 29-2n-7e (otd 2608)	100	2630
Newson, Walker 2, sw nw sw 11-4n-6e	45	1175
POTTAWATOMIE COUNTY—		
Magnolia, Jones 4, sw ne ne 18-7n-4e	75	3940
SEMINOLE COUNTY—		
Lynch, R. Swan 1, nw nw ne 24-5n-5e (pb 2785)	182	2815
Ledge O&G, Factor 2, sw nw se 25-5n-7e (pb 2324)	300	2327
Manahan, Scroggins 1, nw ne se 22-6n-6e	230	2335
Amerada, Ellis 3, nw ne ne 2-10n-5e	279	4648
STEPHENS COUNTY—		
Gulf Oil Corp., Sims 12, se ne sw 13-2s-4w (pb 370)	2	1080
Walter C. Brainerd, Cruce 1, nw nw se nw 10-2s-5w	8	808

*Failbures; †Junked; ¶Million cu. ft. gas.

PIPE LINES

Lincoln "Shield-Arc" welders and "Fleetweld" electrodes were used exclusively on the new expansion program of Panhandle Eastern Pipe Line Co. The line is mostly 24" pipe. Composite construction used. Welded joints plain butt with chill ring, made with two passes. Photo courtesy of The H. C. Price Co., Bartlesville, Okla.

HERE'S HOW YOU PROFIT BY ARC WELDING THEM

• A leading pipe line contractor gives these four reasons for the increasing demand of shielded arc welded construction in the building of oil and gas lines:

"1. HIGH QUALITY WELDS. During the past ten years we have made more than a million shielded arc welds. Not a single one has failed. They are stronger and more ductile than welds of other process.

"2. LOW COST. Welding fuel costs are 50% to 60% less per hour.

"3. FAST, DEPENDABLE OPERATION. The arc welder is a self-contained plant. No containers or large supply of water to haul. Freezing temperatures are no handicap.

"4. OIL COMPANY PRODUCTS USED (gasoline and oil for engine driven welders)."

HERE'S HOW YOU ARC WELD THEM

This book contains...

1. Pipe line welding procedure for firing line, bell-hole, "stove-pipe," river crossings.
2. Tabulated welding data—speeds, pipe spacing, electrode consumption, arc heat.
3. Application data on scores of oil and gas lines.
4. Sample welding specifications for oil and gas lines.

Every executive and engineer of companies that own, operate or build pipe lines should have this new book. A free copy is yours for the asking. Mail the coupon today, or write to THE LINCOLN ELECTRIC COMPANY, Department L-447, Cleveland, Ohio. Largest Manufacturers of Arc Welding Equipment in the World.

THE LINCOLN ELECTRIC CO.
Dept. L-447, Cleveland, Ohio

Send a free copy of Bul. 418 on pipe line construction.

Name _____

Position _____

Company _____

Address _____

City _____ State _____

LINCOLN SHIELD-ARC WELDING

PRODUCES A STRONGER, MORE LASTING CONSTRUCTION FASTER, AT LESS COST

to 3317 feet, plugged back to 3264 feet and tested.

West of the Allen field, Magnolia Petroleum Company's Reed 2, SE NW NE 26-5n-7e, filled with salt water after finding top of the Wilcox sand between 4175 and 4179 feet. It was being plugged back to 4168 feet for a test of oil showings had in the Simpson dolomite between 4158 and 4164 feet. Top of the dense was at 4048 feet and dolomite was found at 4118 feet.

W. A. Delaney, Jr.'s Reed 2, NE SW SW 12-5n-7e, had a small show of oil in the first Wilcox sand and was drilling ahead below 4265 feet, looking for the second Wilcox sand.

The ever interesting Coal County test, Carter Oil Company et al's Claytor 1, CWL NE SW 27-2n-9e, in the Centrahoma area, was coming out with drill pipe after a 30-minute drill stem test had no show. Two cores, the first from 6332 to 6337 feet and the second from 6337 to 7342 feet, were not recovered, and the test followed with cone packer set at 3362 feet.

Southeast of Tupelo in Coal County, Phillips Petroleum Company's Beck 1, SE SW SW 6-1n-9e, was drilling ahead below 4857 feet, still looking for the Wapanucka lime.

In Hughes County, Phillips' Becker 1, NE NW SW 8-5n-10e, southwest of Calvin, made an estimated 19,700,000 cubic feet of gas from the Cromwell sand at 4425 feet. When last reported it was preparing to core ahead from the total depth of 4429 feet. It had top of the sand at 4398 feet. A very slight mist of oil was had with the gas.

Riley & Talbott's Weidler 1, NW SW NW 29-17n-2e, in northwestern Lincoln County, took a drill stem test at 4906 feet after finding fairly good saturation in Simpson dolomite, but when opened for 24 minutes, filled 400 feet with mud. It was drilling up packer rubbers.

KANSAS FIELDS

New field found 3 miles southeast of Gates.

* * *

Russell County has new pool near Hall.

* * *

Good well extends Habiger to northwest.

Wichita.—Two new pools were found in Kansas last week, one in Stafford County and the other in Russell County. Recently opened pools in the state were showing signs of rapid development and established areas continued reports of good production.

Three miles southeast of the Gates pool in Stafford County, Fred Rust et al's Drach 1, NEc SW 12-22s-13w, opened a new Siliceous lime pool. In the lime between 3693 and 3698 feet, production tests were being started at once. A saturated core was recovered higher in the hole two weeks ago, and last week another test at 3704 feet showed 1250 feet of oil in the hole. In 18 hours it swabbed 20 barrels of oil.

Two miles southeast of Drach 1, Stanolind Oil & Gas Company's Teichman 1, SEc 13-22s-13w, was coring below 3720 feet in the Simpson series.

Second Siliceous lime pool for the state was opened at Parks et al's Opdyck 1, SWc 20-14s-13w. At 3180 feet it reported 2700 feet of oil in the hole. The well is 1½ miles northeast of the Hall pool of Russell County.

Habiger Is Extended

Skelly Oil Company's Moran 1, SEc 31-17s-10w, in the Ellsworth County sector of the newly opened Habiger pool, was completed last week as a northwest extension well. After topping the Kansas City lime at 2934 feet, it drilled to 3015 feet and a showing of oil there was acidized. During an 8-hour test, it flowed 1157 barrels of oil the first four hours and 1130 barrels of oil the next four hours. Estimated production for a 24-hour period was 6781 barrels of oil with 4,000,000 cubic feet of gas.

Otis Has Oil Show

Possibility of production was reported for Carter Oil Company's Pascoe 1, NWc 36-18s-16w, one-half mile south of production in the Otis gas and oil pool of Rush County. It recovered a six-foot core from between 3584 and 3591 feet containing a stain of oil. It was running casing after getting another stain in the Regan sand at 3591 feet and was last reported ready to bail.

Outcome of a Rice County wildcat was being closely watched. Bell Oil & Gas Company's Timbers 1, NWc NE 8-21s-9w, west of Sterling, had top of the Siliceous lime at 3503 feet, and a drill stem test was being taken with the hole at a total depth of 3526 feet. It had no show in a core taken below 3508 feet.

Increased production was reported for Tom Palmer et al's Polzin 1, NWc SE 4-16s-12w, which opened a new pool for Barton County two weeks ago. Original production was from the Gorham sand between 3311 and 3316 feet, but when deepened to 3325 feet in Siliceous lime, it had 3200 feet of oil in the hole. It was preparing to take potential.

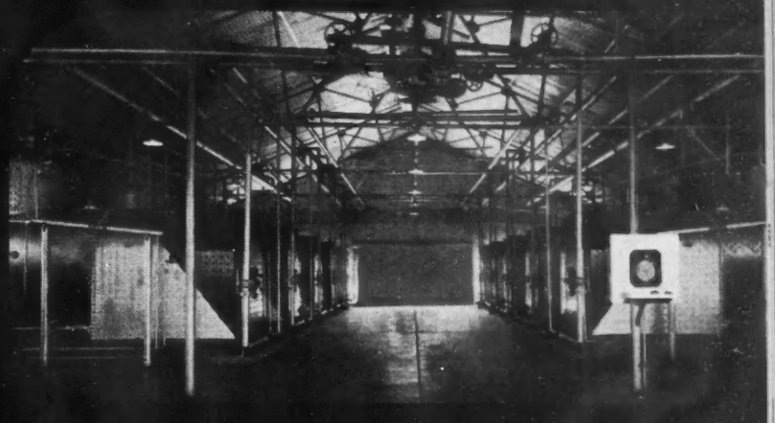
Recent pool opener for Barton County, Shell Petroleum Corporation's Peterman 1, SE NE SE 13-16s-14w, two miles south of production in the McClanahan pool, was completed for a potential of 1654 barrels of oil, coming from the Siliceous lime after acid treatment.

The company was rigging up standard tools at Ehrlich 1, SWc 1-16s-14w, three-quarter miles south of production in the pool. A core saturated with oil

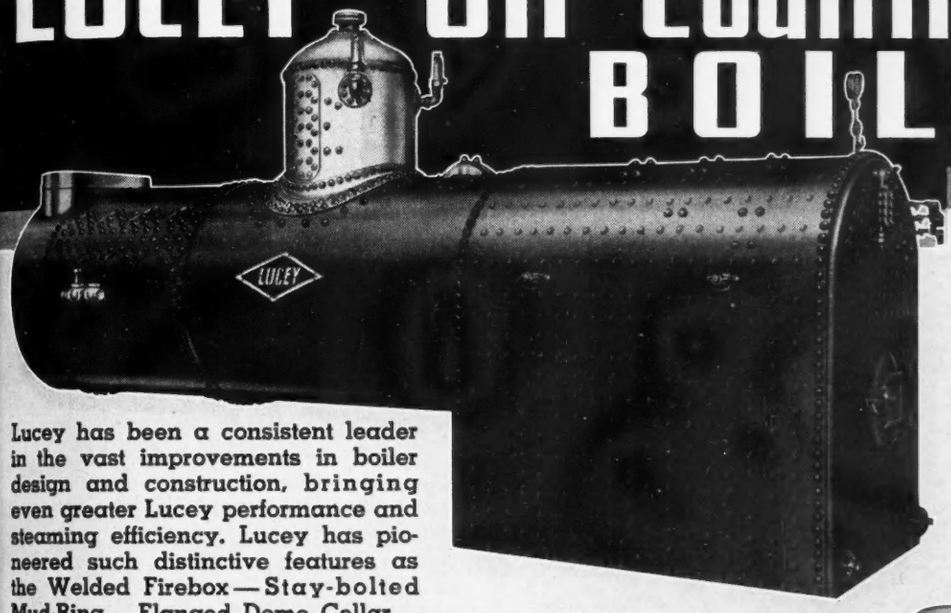
Lucey
BOILERS
(see opposite page)
Distributed throughout the Mid Continent and Gulf Coast by
BRIDGEPORT
For prompt delivery on Lucey Boilers, from convenient stocks or direct from the factory, telephone the handiest Bridgeport Representative—station to station.
THE BRIDGEPORT MACHINE COMPANY
HOUSTON . DALLAS . SAN ANTONIO . CORPUS CHRISTI . ODESSA
SHREVEPORT . TULSA . OKLAHOMA CITY . WICHITA . and Branch Stores

For all Oil Country uses

YOU CAN'T BEAT

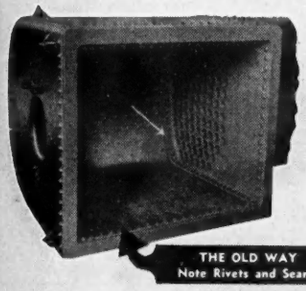


LUCEY Oil Country BOILERS ...



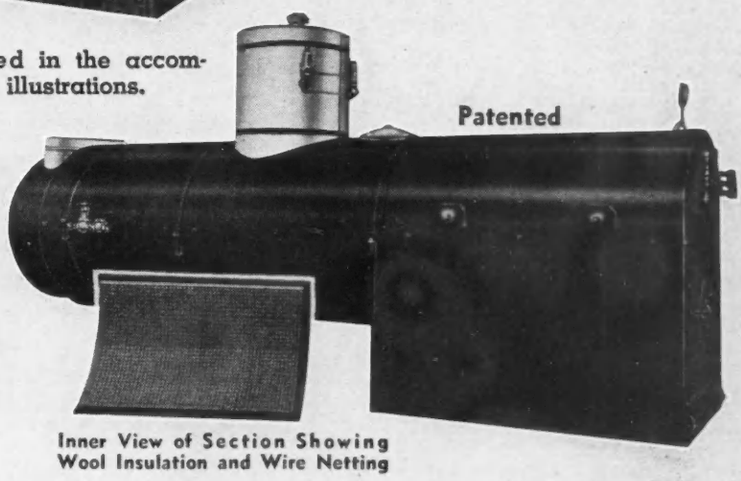
For all Oil Country uses — in all climates and under all field conditions — Lucey Rivetless Fire Box Oil Country Boilers have increased rapidly in popularity and use. By actual test under scientific supervision Lucey Boilers with A. P. I. Rating of 104 HP have maintained 132 HP. In practical use they have cut drilling costs and reduced drilling time, through consistent, uninterrupted performance.

Lucey has been a consistent leader in the vast improvements in boiler design and construction, bringing even greater Lucey performance and steaming efficiency. Lucey has pioneered such distinctive features as the Welded Firebox — Stay-bolted Mud-Ring — Flanged Dome Collar — Short Tubes — Over-the-tubes Manhole Location, etc. Important boiler history is reflected in the accompanying facts and illustrations.



THE OLD WAY
Note Rivets and Seams

LUCEY STYLE
Welded Fire Box (Patented)



Inner View of Section Showing
Wool Insulation and Wire Netting

LUCEY BOILER FEATURES:

1. SEAMLESS FIRE BOX, LUCEY PATENT. No Rivets or Overheat or Burn. No Leaky Seams.
2. 18" Between Crown Sheet and Outside Wrapper (never less). Plenty of STEAM SPACE with two gauges of water.
3. ARCHED CROWN SHEET, LARGE CORNER RADII. Good Staybolt Threads. Stronger Construction, Easy Cleaning, Better Combustion.
4. SHORT TUBES (13 ft.) In VERTICAL ROWS. Effective Heating Surface.
5. 4" WATER SPACE all around the Fire Box. Good WATER CIRCULATION.
6. RATING — A. P. I. ____ 104 H.P.
   —Actual Field Test ____ 132 H.P.

OTHER MAKES OF BOILERS HAVE SOME OF THESE FEATURES — LUCEY ALONE HAS THEM ALL!

MORE HEAT AT LOWER COSTS WHEN YOU INSTALL LUCEY STEEL JACKETED BOILER INSULATION

Write for No. 141-1 on Boilers; No. 110-2 on Insulation

LUCEY

LUCEY BOILER and MANUFACTURING CORPORATION

Chattanooga, Tenn.

was recovered from the lime and the well was to be drilled in for a rest. Completion of the well as a commercial producer would connect the McClanahan and Peterman pools.

I. W. Murfin et al's Martin 1, SEc NW 18-28s-1e, recent pool opener for Sedgwick County, producing 47 gravity crude from the Wilcox sand, was drilling plugs for a test. The well made 1000 barrels of oil during preliminary tests. It was bottomed at 3491 feet. A line from the pump station of Darby Oil Company near the Robbins pool has been laid to the new well.

National Refining Company's Fee 1, SE NE SE 26-27s-2e, in Sedgwick County, nine miles east of Wichita. After getting a hole full of water from between 2862 to 2866 feet in the Mississippi lime, it was underreaming casing down to 2875 feet and was to drill deeper. It was at 2877 feet. Encountering 7,000,000 cubic feet of gas in the Kansas City lime, it drilled deeper, finding top of the Mississippi at 2801 feet.

Deep Rock Oil Corporation was completing Baumer 25, NW SE NE 27-11s-17w, in the Bemis pool of Ellis County. Top of the Siliceous lime was found at 3429 feet and at 3444 feet, filled 3000 feet with oil. It was waiting on potential. Margay Oil Company completed Johnsen 7, SEc 22-11s-17w, for a potential of 2727 barrels of oil. Production is from 3381 feet in Siliceous lime.

Glimac Oil Company et al's Weisner 1, SE SW SE 31-13s-17w, a wildcat east of Hays in Ellis County, made 2½ barrels of oil in one hour, natural, from 3607 feet in the Siliceous lime.

Carter Oil Company's Detrich 8, NE SE SW 8-15s-13w, west of the Anschutz pool of Russell County, was given a potential of 1944 barrels of oil. It was producing from 3174 feet in lime.

An extreme western Kansas wildcat was marked a failure last week, as Morgan, Flynn, Cobb et al's McMillan 1, C NW 9-13s-37w, near Russell Springs in Logan County, was being plugged. Mississippi lime was found at 5055 feet, 235 feet thinner than in other tests with which the test is being correlated. Siliceous lime, also thin, was at 5290 feet and granite at 5467 feet.

Earl Wakefield et al's Zimmerman 1, SEc SW 7-16s-18w, northwest of La-Crosse in Rush County, had a hole full of water coming from 3655 to 3665 feet in the Lamott sand and was shut down.

KANSAS

Completions

Company, Well and Location	Init Prod. Bbls.	Depth
BARBER COUNTY—		
Helmerich & Payne, Blunk Est. 1, cse¼ 18-34s-13w	*	5405
BARTON COUNTY—		
Polk & Fortson, Meyer 3, se nw se 16-16s-12w (pb 3346)	603	3349
Carter, Denis Hogan 1, ne sw nw 11-17s-11w	1890	3336
Stanolind, Lena Knop "B" 1, nw nw se 32-19s-11w	*	3387
Burmeister 3, se se ne 35-19s-11w	1008	3292
Wm. Panning 4, nw sw se 2-20s-11w	1801	3281
Lario & Atlantic, Zahorsky "B" 2, se se ne 23-20s-11w	1969	3263
I. T. I. O., Schrepel "A" 4, ne ne ne 26-20s-11w	2198	3273
BUTLER COUNTY—		
Cities Service, Lathrop 29, sw sw nw 17-23s-4e (pb 2086)	180	2112
Phillips, J. C. Sculley 18, ne se se 17-23s-4e	96	2080
COWLEY COUNTY—		
Lloyd-Frost & Study, K-Wilson 1, se se sw 33-31s-3e	7	2604
Murta & Wilson, Turner 2, se ne nw 30-32s-6e	360	2263
ELLIS COUNTY—		
Gulf, Pearl 1, ne ne se 13-11s-17w	1604	3357
Cities Service, Hall "A" 1, sw sw sw 14-11s-17w	1174	3440
Lebow et al, Richmond 2, se sw se 15-11s-17w	2098	3441
Ryan Conso. Bemis "B" 6, ne se nw 22-11s-17w	2873	3447
Deep Rock, Baumer 22, nw sw ne 27-11s-17w	3341	3507
Baumer 23, se ne ne 27-11s-17w	3233	3396
Wentz, Bemis 7, sw ne nw 28-11s-17w	1643	3433
Billings, Oswald 1, ne se sw 11-12s-16w	1367	3105
GRANT COUNTY—		
R. K. Wilson, Sledd Fram Corp., 1-12, cse 12-28s-38w (pb 2640)	¶5.5	2800
GREENWOOD COUNTY—		
D. M. Rhodes & Co., Browning 8, sw sw sw nw 18-22s-10e	*	2675
Katz Oil Co., Life 2, nw nw ne 13-26s-9e	30	2132
S. VanDeVanter, Dove 1, ne se sw 12-28s-11e	*	1300
HARVEY COUNTY—		
Sunray, Hege 2, nw nw sw 13-22s-2w	756	3305
Olson Drlg. Co., Schrag Jr., 4, sw se sw 30-23s-3w	1065	3360
MARION COUNTY—		
R. E. Youker, Martin 1, se se se 3-17s-4e	*	2371
McPHERSON COUNTY—		
Wamhoff et al, Nuse 1, se ne sw 18-18s-4w	*	1850
Shawver, Lively 4, ne sw nw 21-19s-1w	362	3420
T. C. Johnson, Good 3, ne se nw 13-19s-3w	105	2342
Bradley Bros. Barnholt 1, sw sw se 30-20s-5w	131	3355
RENO COUNTY—		
Cities Service, Haury "B" 2, sw se sw 1-23s-4w	298	3387
Shaffer et al, Hill 1, sw se se 18-24s-4w	15	3385
RICE COUNTY—		
Sinclair Prairie, Bolton 4, sw sw sw 31-18s-7w	1077	3232
Carter, Risse 6, cn¼ n½ s½ sw 33-19s-10w	1515	3298
Continental, Anna Groth 3, se se sw 32-20s-7w	1452	3342
H. B. Garden, Oden 5, ne nw ne nw 5-21s-7w	5379	3330
Douglass, Theede 15, ne se sw 9-21s-7w	1238	3392
ROOKS COUNTY—		
Atlantic, McClay 1, nw nw sw 12-9s-17w	6321	3338
RUSH COUNTY—		
Ohio Oil, Brack 2, sw sw sw 24-18s-16w (pb 3538)	49	3550
RUSSELL COUNTY—		
Saco Oil et al, Shaffer 1, se ne nw 31-13s-12w	*	3420
R. H. Shields, Letsch 3, nw ne se 27-14s-13w	2997	2960
Phillips, Carroll 4, se ne se 18-14s-14w	2350	3070
Darby, Dumler "B" 5, se se nw 11-14s-15w	1670	3073
Transwestern, Wm. Polcyn 10, nw ne sw 11-14s-15w	1105	3063
Hartman & Blair, Harbaugh 8, sw ne sw 25-14s-15w	1351	3183
Trapp Drlg. Co. & Ramsey, Polcyn 1, ne ne se 34-14s-15w (pb 3298)	*	3361
Skelly, Neidens 8, se sw se 32-15s-13w	976	3314
STAFFORD COUNTY—		
Stanolind, K. Kentzel 1, nw nw nw 34-21s-12w	1827	3409
Hannum Drlg., C. H. Thale 1, ne ne ne 27-23s-12w	*	3882
TREGO COUNTY—		
Central Commercial, Locker 1, csw¼ 12-14s-22w	*	4731
WOODSON COUNTY—		
Alexander & Bell, Haas 3, ne nw se 22-23s-14e	2	1665
Young, Stevenson 1, c se nw 5-24s-14e	50	1722
Sheedy et al, Tipton 6, ne sw nw 28-25s-14e	50	1470

*Failbures; †Junked; ¶Million cu. ft. gas.

NEW MEXICO

Vacuum pool is extended 3¼ miles south by Texaco.

★ ★ ★

Emperor test, 2¼ miles east of Maljamar, showing oil.

Hobbs, N. M.—Expansion of the productive limits of Vacuum pool, most promising lime area in Lea County awaiting development, about 3¼ miles to the south, materialized the past week. The Texas Companys State 1-L, C SW NE 1-18s-34e, upheld its favorable structural position in making a natural flow of 15 barrels of oil per day, with gas volume rated at 4,500,000 feet daily from the first saturated section at 4297-99 feet. Drilling was in progress at 4310 feet. It has an elevation of 3998 feet, and is several hundred feet above the most productive horizon. Completion of a prolific natural producer by this outpost will stimulate development of the area, which was uncovered in June, 1929, but drilling has been delayed due to the absence of an oil market.

Two Prospective Strikes Delay

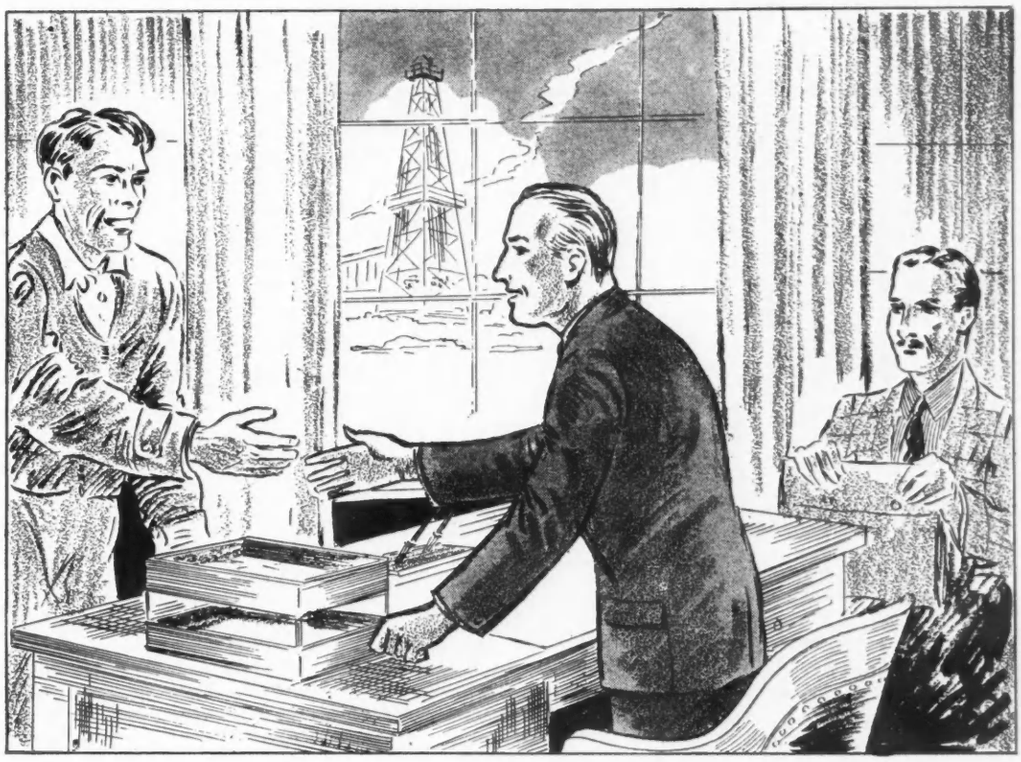
Two prospective oil discoveries for Eddy County offered no new developments the past week. Ralph A. Shugart et al's Coulthard 1, C NW SW 35-18s-31e, near the east edge of the county and about 9 miles southwest of the Maljamar field, deferred production test until a string of 7-inch is cemented above the oil sand logged at 3440-47 feet, with an elevation of 3632 feet. The hole filled 1500 feet with 37.2 gravity sweet oil. Continental Oil Company et al's Ada N. Etz 1-A-24, C NW NE 24-16s-30e, near the north line of the county and about 5 miles north of oil production, tested 1 bailer oil and 2 bailers water per hour, after a nitro shot at 3680-3725 feet, and has been plugged back again with 30 sacks cement. It was originally drilled to sulphur water in the big lime at 3740-45 feet, with an elevation of 3860 feet, then plugged back to 3725 feet for shot.

Emperor Oil Company's Johns 1, C

NEW MEXICO Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
EDDY COUNTY—		
W. & K. Royalty Co., State 1, c sw ne 16-17s-31e	120	3678
LEA COUNTY (Eunice)—		
Continental et al, M. Lockhart 6-A-30, ne se nw 30-21s-36e	45	3996
Gulf, State-Bell-Ramsey 1-B, c sw sw 29-20s-36e	8	3840
Two States Oil Co., R. W. Atha 1, c sw sw 31-21s-36e	384	3872
LEA COUNTY (Mattix)—		
Repollo Oil Co., Robt. Jamison 3, sw ne ne 21-24s-37e	200	3669
Schermerhorn Oil Corp., E. Woolworth 2, c se ne 28-24s-37e	326	3577
LEA COUNTY (Monument)—		
Continental, State 3-A-26, c sw nw 26-19s-36e	38	4024
Gulf, State-Kutter 3-C, c se nw 18-19s-37e	492	4030

*Failbures; †Junked; ¶Million cu. ft. gas.



SERVING OIL MEN

. . . and their Special Needs

● Since the coming of oil to North and West Texas, and the later discovery of the East and South Texas fields, Fort Worth has become recognized as the Hub of the Oil Industry in the Southwest, and Fort Worth Banks have a thorough understanding of the banking services that Oil Men need.

Company officials and employees, and individual operators find a welcome at these banks. They find friends who speak their language . . . and what is more, bankers who like to talk it.

They find that these banks have resources and facilities adequate for all their needs, and bankers who will take a personal interest in the welfare of each and every customer.

These Fort Worth Banks welcome an opportunity to serve this great industry.

FORT WORTH CLEARING HOUSE ASSOCIATION

THE FIRST NATIONAL BANK
THE FORT WORTH NATIONAL BANK
CONTINENTAL NATIONAL BANK

SW NW 24-17s-32e, about 2¼ miles east of the original section of the Maljamar pool, is showing for a small oil and gas producer from upper lime while drilling at 4220 feet. It has an elevation of 4049 feet. The best saturated lime section is due at about 4300-50 feet.

Lea County Corner Wildcat

The extreme southeast corner of Lea County is to receive a wildcat shortly on a 2560-acre federal permit held by Warren L. Todd, Dallas operator and drilling contractor. Location has been made for Mable Leonard 1, C SE NW 29-26s-38e. Dry holes flanking this permit afford accurate subsurface control.

Progress on R. Crandall, J. C. Maxwell and C. H. Osmond's Maxwell Permit 1, C SE SE 2-11s-36e, northern Lea County wildcat in the Ranger Lake area, is commanding attention. Another rainbow show of oil was logged at 4395-4402 feet in lime topped at 5252 feet, with an elevation of 4044 feet. Drilling was under way at 4700 feet. Geologists report a good quality of lime section. The Fort Worth owners have a block of about 3500 acres, and made the location on surface geology and geophysics.

New operations in Lea County continue at a reduced level. Six locations were made public the past week, all offsetting production in the established fields.

Edge Well Looks Good

Continental Oil Company et al's H. M. Britt 1-B-10, C W½ SW SW 10-20s-37e, became the easternmost producer in Monument field when the well made a light spray of oil when tested through casing with drill pipe in the hole at 3684-3865 feet. Additional saturation was logged in deepening to 3875 feet, or 310 feet subsea, where a test through tubing is pending.

A two-mile northwest extension for the Mattix field was attained by Repollo Oil Company's R. W. Cowden 1, NE NE NE 31-23s-37e, which flows by heads when agitated. It was drilled in with cable tools to 3620 feet, or 299 feet below sea level. This outpost paves the way for the eventual linking of the Mattix and Skelly sandy-lime areas.

The west portion of Langlie field has added two new projects. Sun Oil Company is to drill B. T. Lanehart 2, C NE SE 20-25s-37e, near the Jal Townsite, and Herschbach Drilling Company has started operations on F. M. Burleson 1, C E½ NE NW 8-25s-37e. Amerada Petroleum Corporation has rigged up to drill Hugh Corrigan 2, C S½ SE NE 4-22s-37e, offsetting production in the Penrose field.

Revised proration schedule for the November period issued by C. G. Staley, umpire, advanced production for the state 800 barrels to a top allowable of 104,800 barrels. The increase proved adequate to offset new completions, thereby making it possible for the average yield of Lea County's prorated wells to remain at 67 barrels daily.

J. R. McCREARY, Edmonton, connected with Alberta oil industry for many years, was in Calgary last week negotiating for equipment on behalf of associates who will drill for gas on the Holland-Treherne structure, 25 miles southwest of Portage la Prairie, Manitoba.

Heavy oil strike going deeper for better production.

* * *

Yoakum County part of Wasson gets large extension.

* * *

Sinclair well extends Jordan field half mile east.

Midland, Texas.—The low gravity oil discovery in western Pecos County made early last week by Humble Oil & Refining Company's F. N. Belding-Lunger 1, near C NE SE Section 99, Block OW, is being deepened to seek more attractive production. The well filled 1100 feet with 16.6 gravity oil in nine hours after penetrating one foot into sandy-lime topped at 2450 feet, with an elevation of 3085 feet. The fluid level remained constant when bailed for three hours, and during this period showed about half bailer sulphur water. No increase in water was noted in drilling to 2480 feet, where the fluid level rose to 1600 feet.

Phillips Petroleum Company developed small production, testing 25-26 gravity, from 1300-1400-foot zone in exploring a block about nine miles to the north in 1929. E. R. Minshall et al's Banker 1, about 6½ miles northeast of the new strike, flowed a small amount of cut oil last March after a nitro shot in 2900-foot zone, and a second test is being started to the east on the Michaelson tract, C NW NW of T. & St. L. Ry. Section 24, Block 146.

TEXAS PANHANDLE Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CARSON COUNTY—		
British-American Oil Prod. Co., B. F. Block 2	460	3080
Great West Oil Co., B. F. Block 1	477	3168
Gulf, E. Cooper 21	284	3029
Holmes et al, J. E. Quinn 8	687	3097
J. R. McGill et al, E. Cooper 4-B	733	3122
GRAY COUNTY—		
Danciger Oil & Refineries, Inc., Powell-Beck 16	243	2922
Formax Drlg. Co., Kretzmeir 1	517	3250
Magnolia, John Haggard 11	575	3297
G. H. Saunders 3-B	20	2799
Stanolind, J. A. Hood 3	398	3095
HUTCHINSON COUNTY—		
J. E. Crosbie, Inc., H. W. Pitts 18	720	3051
H. W. Pitts 23	690	2984
Phillips, Supreme-Staples 1-A	347	3248
Seaboard Oil Corp., J. A. Whittenburg 2	352	2723
Stanolind, H. B. Terry 6	393	2963
E. E. Watkins 14-A	367	2891
E. E. Watkins 4-B	444	2913
E. E. Watkins 5-B	496	2868
Stayton Oil Co., J. W. Moore 4-B	250	3145
Harry Stekoll-Darby Pet. Co., Dial-Perkins 7	383	3025
MOORE COUNTY—		
Canadian River Gas Co., N. H. Read 2-A	¶48.4	3500
WHEELER COUNTY—		
Columbian Fuel Corp., (was Piney O&G Co.), Bentley 5	170	2348
DuMar O&G Co., R. L. George 1	¶8.9	1895
Homer Ewton et al, A. R. Evans 2	110	2452
Lela O&G Co., Laycock 10	*	2650
R. A. Nipper et al, W. S. Walker 1	20	2440

*Failbures; †Junked; ¶Million cu. ft. gas.

Wasson Enlarged

The Yoakum County section of Wasson field was extended 1½ miles northwest when Producers Investment Corporation and American Liberty Oil Company's Clawater 1, C SW SW Section 766, Block D, flowed an average of 10 barrels oil per hour for 12 hours following 1000-gallon acid treatment at 5083 feet. It is credited with being about 90 feet lower on structure than the nearest producer, and presumably is on the northeast nose of the Wasson anticline. The Texas Company's W. F. Walker 1, about 3½ miles northwest of production, has been officially listed as a completion after nitro shots and acid treatments. The well swabbed 68 barrels of oil in seven hours, and will require pumping equipment when placed on steady production. It was plugged back from 5180 feet to 5162 feet, or 1506 feet subsea. Amerada Petroleum Corporation's Matthews 1, located more than one mile west and southwest of flowing production in the Gaines County portion of the field, pumped 189 barrels fluid, 19 percent water, during the first 22 hours. It was plugged back from 5018 feet to 4998 feet and acidized.

Seven New Locations

Seven new locations have been authorized for the Wasson field, including five that are required by offset production.

A pipe line connection for Bennett pool, Yoakum County, was completed November 1 by Humble Pipe Line Company. There are five flowing wells in this area, and one drilling test. Shell Petroleum Corporation has made location for Bennett 1, NE SE NE Section 677, one-quarter mile south of the most westerly producer.

Link Narrowing

Merging of Judkins, Jordan and Waddell fields, located along a northwest to southeast trend in Ector and Crane counties, advanced nearer realization by developments the past week. The former two areas were recently linked, and

SUPER EXCELO

OIL COUNTRY BELTING

• is One Employee that Works Hard for Long Hours at Small Pay

MID-CONTINENT DISTRIBUTORS
Frick-Reid Supply Corporation, Tulsa, Okla.
The Bovaird Supply Company, Tulsa, Okla.

PACIFIC COAST DISTRIBUTORS
W. C. Hendrie & Company, Inc., Los Angeles, Calif.
Pacific Coast Rubber Co., San Francisco, Calif.

Branded with the A. P. I. Symbol and made to specifications that considerably exceed the A. P. I. minimum requirements.

THE remarkable enduring qualities of Super Excelo have made it a favorite transmission belt for the hard, continuous pumping of oil in deep well fields. The many years during which this famous product has served oil producers have definitely proved its ability to minimize power expense and, at the same time, lower belting costs. It not only meets the A. P. I. requirements—it gives a higher value based on Republic Standards which have been developed from our own scientific investigations of oil pumping operations under all conditions.

REPUBLIC RUBBER

Division OF LEE RUBBER AND TIRE CORPORATION
YOUNGSTOWN, OHIO

Manufacturers of HOSE
BELTING • PACKING
MOLDED PRODUCTS

ORDER REPUBLIC RUBBER PRODUCTS FROM YOUR DISTRIBUTOR

the interval between the Jordan and Waddell fields was reduced to less than two miles the past week. Sinclair Prairie Oil Company's University 2-27, SW SW NW Section 12, Block 35, Crane County, widened the Jordan field a half mile east with a natural flow of 258 barrels oil in 88 minutes through casing from lime at 3547-65 feet. It has an elevation of 2810 feet, and is running tubing to complete. A dry hole was drilled by the company three locations to the east last April. Snowden & McSweeney Company's University 2, near C SE Section 13, is extending production to the southeast, having 2500 feet of oil in hole while drilling at 3525 feet, with an elevation of 2792 feet. The main pay level is due at about 3550 feet. Gulf Oil Corporation is rigging up for M. F. Henderson 11, SE NE NW PSL Section 4, Block 23, to try and close the gap between the Jordan and Waddell fields.

Another wildcat project for southwestern Gaines County is in prospect. Wm. F. Hannigan et al are credited with making progress on financing a test to be located on Stanolind Oil & Gas Company's P. C. Dunbar tract, PSL Section 24, Block A-12. R. H. Gill et al's Simpson 1, wildcat in the south central portion of the county was abandoned in sulphur water at 5502 feet.

Bailey County added another failure through the plugging of J. O. Whittington et al's McCelvey 1, Labor 12, League 162, Presidio County School Lands, after drilling to 4608 feet.

NORTH TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
C. H. Herbig et al, H. O. Prideaux 1, lot 2	*	653
S. H. Huggins et al, J. J. Perkins 1-A, blk 14	*	1797
Shappell Oil Co., J. Connor 6-A	10	1110
M. Staniforth et al, T. B. Wilson 18-A	45	1602
Westmount Oil Co., W. Shropshire 2, blk 10	*	1804
Whitehill Oil Corp., H. S. Morrison 26, blk 4	*	680
CLAY COUNTY—		
W. H. Clark et al, C. Scheer 1	*	1007
Sussex Oil Co., C. J. Shumake 8, blk 4	56	1150
COOKE COUNTY—		
A. D. Robinson et al, J. H. Otto 9-B, blk 5	20	832
Trunter Oil Co., Andress Bros. 11	50	780
Andress Bros. 12	38	822
JACK COUNTY—		
Cockburn Oil Corp., J. M. Box 4	334	3177
R. R. Clayton 5	480	3101
Edwards, Knowles & Crespi, R. R. Clayton 1	*	3100
L. A. Long et al, W. J. Smith 4	20	3000
Mullendore, Berry & Berry, D. C. Clayton 7	303	3085
Panhandle Ref. Co., D. R. Sewell 1	5	3256
Peery & Woody, J. A. Raley 9-B	15	2933
York-Tex & States Oil Corp., D. C. Clayton 7-B	163	3051
MONTAGUE COUNTY—		
Arco Oil Co., M. H. Salmon 12-E	102	1640
M. H. Salmon 13-E	10	1668
Raizen Bros., N. J. Howard 7	7	1191
Sinclair Prairie, W. C. Combs 2, blk 66	*	1892
WICHITA COUNTY—		
Coleman & Coppock, G. R. Hoge 11, blk 39	*	863
Perkins & Cullum Oil Co., S. B. Burnett 8-A, sec 1	*	1608
Petroleum Producers Co., First Nat'l Bank 77, blk 29	625	3849
First Nat'l Bank 1-G, blk 29	720	3850
Pois & Schulz, R. W. Ramming 1	*	2005
Geo. Proctor et al, Foster-Allen 18-A, sec 1	†	1472
Ryan Consol'd Oil Corp., G. E. Nance 117	6	501
G. E. Nance 120	8	507
WILBARGER COUNTY—		
King Oil Co.-Phillips Pet. Co., R. L. Castleberry 1, sec 68	288	2187
Phillips, Waggoner Est. 202, sec 43	1200	3060
YOUNG COUNTY—		
Thos. D. Humphrey, E. M. Ball 1, sec 445	1130	3907
Tide Water Associated, J. D. Carpenter 7-A, sec 237	10	1030
West & Honea, B. N. Honea 4, sec 1492	15	845
Henry Zweifel et al, B. C. Harrison 1	*	2651

*Failbures; †Junked; ¶Million cu. ft. gas.

Texas grants 200 permits

The Texas Railroad Commission approved last week permits for drilling 200 new wells in Texas, 14 more than were allowed the previous week.

Five new locations were granted to operators in East Texas field, two in Upshur County, two in Smith and one in Gregg County. East Central Texas reported 19 new locations.

There were 29 locations reported from West Texas, including 11 in Ector County. West Central Texas reported 23 new locations.

The Gulf Coast District listed 35 new locations, while Southwest Texas reported 33 permits, including 13 from Caldwell County.

North Texas reported 33 new locations, while the Panhandle listed only 23 locations.

WEST TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BAILEY COUNTY—		
J. O. Whittington et al, McCelvey Bros. 1	*	4609
CRANE COUNTY (McCamey)—		
Texas Co., R. King 33	214	2397
CRANE COUNTY (Sand Hills)—		
Humble, J. B. Tubb 14	1260	4430
DAWSON COUNTY—		
Ray Albaugh et al, D. Hogg 1	*	3865
ECTOR COUNTY (Goldsmith)—		
Atlantic, J. D. Slator 3	858	4290
Devonian Oil Co., C. Scharbauer 6-A	880	4208
C. Scharbauer 1-C	1210	4218
Gen'l Crude Oil, H. E. Cummins 4	533	4260
Gulf, C. A. Goldsmith 46	1192	4205
C. A. Goldsmith 48	2248	4225
Laudreth Prod. Corp., C. Scharbauer 1-L	645	4192
Shell, J. D. Slator 1	624	4287
ECTOR COUNTY (Harper)—		
Broderick & Calvert, Inc., E. F. Cowden 2-C	1443	4280
ECTOR COUNTY (Judkins)—		
W. A. Black & Sons, W. E. Connell 5	520	3614
Shell, University 4	135	3665
Sinclair Prairie, W. E. Connell 3	395	3681
ECTOR COUNTY (North Cowden)—		
Stanolind, T. B. Roberts 7	1614	4326
W. K. Royalty Co., R. W. Smith-Amerada 1	253	4334
GLASSCOCK COUNTY—		
F. G. Lippitt & Sam Letwin (was World), L. S. McDowell 5-C	*	2448
Amerada, E. C. Brand 1	†	4484
GAINES COUNTY (Wildcat)—		
R. H. Gill et al, S. R. Simpson 1	*	5502
HOWARD COUNTY—		
W. E. Production Co., R. Wilcox 1	130	3237
JONES COUNTY—		
Danciger, Guitar 9	500	2003
Falls Ref. Co., R. L. Harris 1	*	2200
R. H. Isaacson et al, E. M. Coker 1	*	2665
C. J. Kleiner & Brown Eagle Oil Co., B. Fields 2	*	2235
Lewis Prod. Co., H. Sayles 7	20	2334
Will McKemie et al, W. W. Toombs 1	306	2476
S. B. Owens et al, W. Gilbreth 3	437	2001
Roeser & Pendleton, Inc.-Oil States Explo. Co., E. W. Rosenquest 1	*	3370
A. G. Swanson et al, Manley Bros. 1	*	2010
Ungren & Frazier, H. Dorsey 2-E	334	2360
H. Dorsey 1-H	175	2175
PECOS COUNTY (Taylor-Link)—		
B. C. Mann et al, University 1-B	250	1630
PECOS COUNTY (Torborg)—		
Paul Childress Roy. Co., M. A. Smith-Sinco 23	6	408
Stanolind-Conoco, Tippett 12-C	11	421
PECOS COUNTY (Yates)—		
Humble, M. A. Smith 16-A	2082	1676
RUNNELS COUNTY—		
M. B. Stephenson & Glover, W. J. Fowler 1	*	1095
STERLING COUNTY—		
Snowden & McSweeney Co., R. H. Harris 1	*	1865
UPTON COUNTY (McCamey)—		
Atlantic, M. Shirk 6	627	2350
Basin Oil Properties, Inc., Baker-Gulf 3-B	1025	2370
Cardinal Oil Co., E. Wooley-Shell 3-C	286	2174
Clark & Cooper, J. B. Perry 3	127	2174
John W. Emch et al, E. F. Lyon 4	204	2262
K. C. McCarter et al, Cordova Union 1	*	2653
J. S. Pittman & Breeding, D. Elder 4	985	2384
WARD COUNTY—		
Gulf, E. W. Estes 54	1280	2620
Hutchings Stock Assn. 89	1564	2730
Humble, L. Richter 20	552	2605
WINKLER COUNTY (Eaves)—		
Harry Adams, Bradley et al, W. P. Edwards-Shell 8	500	3140
WINKLER COUNTY (Emperor)—		
Bert Fields et al, E. W. Cowden-Pure 4-A	585	2996
WINKLER COUNTY (Henderson)—		
Champlin & Bass, Inc., J. W. Hess 7	2500	3078
WINKLER COUNTY (Kermit)—		
Gulf, O. Clapp 19	1650	3115
Humble, N. R. Colby 20-C	325	3075
J. B. Walton 8-B	187	3073
Magnolia, N. R. Colby 15	251	3110
J. B. Walton 108	860	2931
WINKLER COUNTY (Keystone)—		
Richardson Oils, Inc., J. B. Walton 4	192	3376
WINKLER COUNTY (Scarborough)—		
Magnolia, W. F. Scarborough 11	24	2980
YOAKUM COUNTY (Wasson)—		
Texas Co., W. F. Walker 1	68	5180

WEST CENTRAL TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BROWN COUNTY—		
Hightower O&G Co., Buckner Orphans Home 1	¶1.6	1500
D. P. Kenyon et al, Stone 2	*	736
Kewanee Oil Co., Hickman 32	*	1352
J. C. VanBibber et al, J. W. Harris 1	*	385
CALLAHAN COUNTY—		
H. B. Herring et al, Loven 1	*	2016
Mesa Verde Oil Co., E. T. Klepper 3	*	1714
R. F. St. John et al, J. A. Hinshaw 1	¶5.3	1744
Ungren & Frazier, J. A. Hutchinson Jr. 1	*	1180
COLEMAN COUNTY—		
Anzac Oil Corp. et al, Overall M. Tye 19	¶3¼	2520
PALO PINTO COUNTY—		
P. Garrett et al, Mabry 1	†	649
E. Lloyd et al, Bailey Bros. 1	*	1820
SHACKELFORD COUNTY—		
Albany Oil Co. & Pardue, Davis 14	12	1596
G. Bailey, Tr., Andrews 1	7	535
Charter O&G Co. et al, Davis 3	*	1617
Healey Drlg. Co. et al, Ackers 3	*	3943
Hickok & Reynolds, Matthews 23 Nail 8-A	18	742
	100	1525
J. D. Meredith et al, Grimes 1	5	1400
M. P. Moore et al, Gray 1	*	1816
Pardue & Caprito et al, Davis 1	20	1625
S. B. Roberts Co., Davis 3	45	1588
Roeser & Pendleton, Inc., E. S. Dawson 40	182	1624
E. S. Dawson 42	31	1618
STEPHENS COUNTY—		
Dean Bros. & Fortex Oil Corp., Watson 1	*	2210
H. E. Talbott et al, M. Kennedy 1	†	3927
M. Kennedy 2	¶4 & 2	3928
M. Kennedy 3	*	3959

*Failbures; †Junked; ¶Million cu. ft. gas.

A Shot in the dark

EVEN A SHARPSHOOTER **has a tough time hitting the target** **if he can't tell where it is.** **That's the reason Lane-Wells developed accurate instruments** **for locating their gun-perforator in the casing. If you order** **a well gun-perforated at 4500 feet, the Lane-Wells crew** **shoots** **at that level. There is no possibility of premature firing** **because the percussion-proof cartridges** **are electrically controlled from the surface** **Lane-Wells safety set-up includes complete liability insurance** **against damage to property and life. If it's results** **you're looking for, call in a Lane-Wells crew**

Tomorrow's Tools Today

LANE-WELLS SERVICES AND PRODUCTS INCLUDE:

GUN-PERFORATORS
OIL WELL SURVEYS
DIRECTION CONTROL OF DRILLING WELLS
PACKERS—LINER HANGERS
BRIDGING PLUGS
Single-Shot Survey Instruments

IN CALIFORNIA

Lewis Knuckle Joints
Kinzbach Whipstocks and Mills

LANE-WELLS COMPANY

Technical Oil Field Services

GENERAL OFFICES AND FACTORY: 5610 South Soto Street, Los Angeles, California

ALEXANDER ANDERSON DIVISION
5610 SOUTH SOTO STREET
LOS ANGELES, CALIF.

GULF COAST DISTRICT
2002 WAYSIDE DRIVE
HOUSTON, TEXAS

MID-CONTINENT DISTRICT
2 N W 10TH ST.
OKLAHOMA CITY, OKLAHOMA

EXPORT OFFICE - 420 LEXINGTON AVENUE, NEW YORK CITY

the interval between the Jordan and Waddell fields was reduced to less than two miles the past week. Sinclair Prairie Oil Company's University 2-27, SW SW NW Section 12, Block 35, Crane County, widened the Jordan field a half mile east with a natural flow of 258 barrels oil in 88 minutes through casing from lime at 3547-65 feet. It has an elevation of 2810 feet, and is running tubing to complete. A dry hole was drilled by the company three locations to the east last April. Snowden & McSweeney Company's University 2, near C SE Section 13, is extending production to the southeast, having 2500 feet of oil in hole while drilling at 3525 feet, with an elevation of 2792 feet. The main pay level is due at about 3550 feet. Gulf Oil Corporation is rigging up for M. F. Henderson 11, SE NE NW PSL Section 4, Block 23, to try and close the gap between the Jordan and Waddell fields.

Another wildcat project for southwestern Gaines County is in prospect. Wm. F. Hannigan et al are credited with making progress on financing a test to be located on Stanolind Oil & Gas Company's P. C. Dunbar tract, PSL Section 24, Block A-12. R. H. Gill et al's Simpson 1, wildcat in the south central portion of the county was abandoned in sulphur water at 5502 feet.

Bailey County added another failure through the plugging of J. O. Whittington et al's McCelvey 1, Labor 12, League 162, Presidio County School Lands, after drilling to 4608 feet.

NORTH TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
C. H. Herbig et al, H. O. Prideaux 1, lot 2	*	653
S. H. Huggins et al, J. J. Perkins 1-A, blk 14	*	1797
Shappell Oil Co., J. Connor 6-A	10	1110
M. Staniforth et al, T. B. Wilson 18-A	45	1602
Westmount Oil Co., W. Shropshire 2, blk 10	*	1804
Whitehill Oil Corp., H. S. Morrison 26, blk 4	*	680
CLAY COUNTY—		
W. H. Clark et al, C. Scheer 1	*	1007
Sussex Oil Co., C. J. Shumake 8, blk 4	56	1150
COOKE COUNTY—		
A. D. Robinson et al, J. H. Otto 9-B, blk 5	20	832
Trunter Oil Co., Andress Bros. 11	50	780
Andress Bros. 12	38	822
JACK COUNTY—		
Cockburn Oil Corp., J. M. Box 4	334	3177
R. R. Clayton 5	480	3101
Edwards, Knowles & Crespi, R. R. Clayton 1	*	3100
L. A. Long et al, W. J. Smith 4	20	3000
Mullendore, Berry & Berry, D. C. Clayton 7	303	3085
Panhandle Ref. Co., D. R. Sewell 1	5	3256
Peery & Woody, J. A. Raley 9-B	15	2933
York-Tex & States Oil Corp., D. C. Clayton 7-B	163	3051
MONTAGUE COUNTY—		
Arco Oil Co., M. H. Salmon 12-E	102	1640
M. H. Salmon 13-E	10	1668
Raizen Bros., N. J. Howard 7	7	1191
Sinclair Prairie, W. C. Combs 2, blk 66	*	1892
WICHITA COUNTY—		
Coleman & Coppock, G. R. Hoge 11, blk 39	*	863
Perkins & Cullum Oil Co., S. B. Burnett 8-A, sec 1	*	1608
Petroleum Producers Co., First Nat'l Bank 77, blk 29	625	3849
First Nat'l Bank 1-G, blk 29	720	3850
Pois & Schulz, R. W. Ramming 1	*	2005
Geo. Proctor et al, Foster-Allen 18-A, sec 1	†	1472
Ryan Consol'd Oil Corp., G. E. Nance 117	6	501
G. E. Nance 120	8	507
WILBARGER COUNTY—		
King Oil Co.-Phillips Pet. Co., R. L. Castleberry 1, sec 68	288	2187
Phillips, Waggoner Est. 202, sec 43	1200	3060
YOUNG COUNTY—		
Thos. D. Humphrey, E. M. Ball 1, sec 445	1130	3907
Tide Water Associated, J. D. Carpenter 7-A, sec 237	10	1030
West & Honea, B. N. Honea 4, sec 1492	15	845
Henry Zweifel et al, B. C. Harrison 1	*	2651

*Failbures; †Junked; ¶Million cu. ft. gas.

Texas grants 200 permits

The Texas Railroad Commission approved last week permits for drilling 200 new wells in Texas, 14 more than were allowed the previous week.

Five new locations were granted to operators in East Texas field, two in Upshur County, two in Smith and one in Gregg County. East Central Texas reported 19 new locations.

There were 29 locations reported from West Texas, including 11 in Ector County. West Central Texas reported 23 new locations.

The Gulf Coast District listed 35 new locations, while Southwest Texas reported 33 permits, including 13 from Caldwell County.

North Texas reported 33 new locations, while the Panhandle listed only 23 locations.

WEST TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BAILEY COUNTY—		
J. O. Whittington et al, McCelvey Bros. 1	*	4609
CRANE COUNTY (McCamey)—		
Texas Co., R. King 33	214	2397
CRANE COUNTY (Sand Hills)—		
Humble, J. B. Tubb 14	1260	4430
DAWSON COUNTY—		
Ray Albaugh et al, D. Hogg 1	*	3865
ECTOR COUNTY (Goldsmith)—		
Atlantic, J. D. Slator 3	858	4290
Devonian Oil Co., C. Scharbauer 6-A	880	4208
C. Scharbauer 1-C	1210	4218
Gen'l Crude Oil, H. E. Cummins 4	533	4260
Gulf, C. A. Goldsmith 46	1192	4205
C. A. Goldsmith 48	2248	4225
Laudreth Prod. Corp., C. Scharbauer 1-L	645	4192
Shell, J. D. Slator 1	624	4287
ECTOR COUNTY (Harper)—		
Broderick & Calvert, Inc., E. F. Cowden 2-C	1443	4280
ECTOR COUNTY (Judkins)—		
W. A. Black & Sons, W. E. Connell 5	520	3614
Shell, University 4	135	3665
Sinclair Prairie, W. E. Connell 3	395	3681
ECTOR COUNTY (North Cowden)—		
Stanolind, T. B. Roberts 7	1614	4326
W. K. Royalty Co., R. W. Smith-Amerada 1	253	4334
GLASSCOCK COUNTY—		
F. G. Lippitt & Sam Letwin (was World), L. S. McDowell 5-C	*	2448
Amerada, E. C. Brand 1	†	4484
GAINES COUNTY (Wildcat)—		
R. H. Gill et al, S. R. Simpson 1	*	5502
HOWARD COUNTY—		
W. E. Production Co., R. Wilcox 1	130	3237
JONES COUNTY—		
Danciger, Guitar 9	500	2003
Falls Ref. Co., R. L. Harris 1	*	2200
R. H. Isaacson et al, E. M. Coker 1	*	2665
C. J. Kleiner & Brown Eagle Oil Co., B. Fields 2	*	2235
Lewis Prod. Co., H. Sayles 7	20	2334
Will McKemie et al, W. W. Toombs 1	306	2476
S. B. Owens et al, W. Gilbreth 3	437	2001
Roeser & Pendleton, Inc.-Oil States Explo. Co., E. W. Rosenquest 1	*	3370
A. G. Swanson et al, Manley Bros. 1	*	2010
Ungren & Frazier, H. Dorsey 2-E	334	2360
H. Dorsey 1-H	175	2175
PECOS COUNTY (Taylor-Link)—		
B. C. Mann et al, University 1-B	250	1630
PECOS COUNTY (Torborg)—		
Paul Childress Roy. Co., M. A. Smith-Sinco 23	6	408
Stanolind-Conoco, Tippett 12-C	11	421
PECOS COUNTY (Yates)—		
Humble, M. A. Smith 16-A	2082	1676
RUNNELS COUNTY—		
M. B. Stephenson & Glover, W. J. Fowler 1	*	1095
STERLING COUNTY—		
Snowden & McSweeney Co., R. H. Harris 1	*	1865
UPTON COUNTY (McCamey)—		
Atlantic, M. Shirk 6	627	2350
Basin Oil Properties, Inc., Baker-Gulf 3-B	1025	2370
Cardinal Oil Co., E. Wooley-Shell 3-C	286	2174
Clark & Cooper, J. B. Perry 3	127	2174
John W. Emch et al, E. F. Lyon 4	204	2262
K. C. McCarter et al, Cordova Union 1	*	2653
J. S. Pittman & Breeding, D. Elder 4	985	2384
WARD COUNTY—		
Gulf, E. W. Estes 54	1280	2620
Hutchings Stock Assn. 89	1564	2730
Humble, L. Richter 20	552	2605
WINKLER COUNTY (Eaves)—		
Harry Adams, Bradley et al, W. P. Edwards-Shell 8	500	3140
WINKLER COUNTY (Emperor)—		
Bert Fields et al, E. W. Cowden-Pure 4-A	585	2996
WINKLER COUNTY (Henderson)—		
Champlin & Bass, Inc., J. W. Hess 7	2500	3078
WINKLER COUNTY (Kermit)—		
Gulf, O. Clapp 19	1650	3115
Humble, N. R. Colby 20-C	325	3075
J. B. Walton 8-B	187	3073
Magnolia, N. R. Colby 15	251	3110
J. B. Walton 108	860	2931
WINKLER COUNTY (Keystone)—		
Richardson Oils, Inc., J. B. Walton 4	192	3376
WINKLER COUNTY (Scarborough)—		
Magnolia, W. F. Scarborough 11	24	2980
YOAKUM COUNTY (Wasson)—		
Texas Co., W. F. Walker 1	68	5180

WEST CENTRAL TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BROWN COUNTY—		
Hightower O&G Co., Buckner Orphans Home 1	¶1.6	1500
D. P. Kenyon et al, Stone 2	*	736
Kewanee Oil Co., Hickman 32	*	1352
J. C. VanBibber et al, J. W. Harris 1	*	385
CALLAHAN COUNTY—		
H. B. Herring et al, Loven 1	*	2016
Mesa Verde Oil Co., E. T. Klepper 3	*	1714
R. F. St. John et al, J. A. Hinshaw 1	¶5.3	1744
Ungren & Frazier, J. A. Hutchinson Jr. 1	*	1180
COLEMAN COUNTY—		
Anzac Oil Corp. et al, Overall M. Tye 19	¶3¼	2520
PALO PINTO COUNTY—		
P. Garrett et al, Mabry 1	†	649
E. Lloyd et al, Bailey Bros. 1	*	1820
SHACKELFORD COUNTY—		
Albany Oil Co. & Pardue, Davis 14	12	1596
G. Bailey, Tr., Andrews 1	7	535
Charter O&G Co. et al, Davis 3	*	1617
Healey Drlg. Co. et al, Ackers 3	*	3943
Hickok & Reynolds, Matthews 23	18	742
Nail 8-A	100	1525
J. D. Meredith et al, Grimes 1	5	1400
M. P. Moore et al, Gray 1	*	1816
Pardue & Caprito et al, Davis 1	20	1625
S. B. Roberts Co., Davis 3	45	1588
Roeser & Pendleton, Inc., E. S. Dawson 40	182	1624
E. S. Dawson 42	31	1618
STEPHENS COUNTY—		
Dean Bros. & Fortex Oil Corp., Watson 1	*	2210
H. E. Talbott et al, M. Kennedy 1	†	3927
M. Kennedy 2	¶4 & 2	3928
M. Kennedy 3	*	3959

*Failbures; †Junked; ¶Million cu. ft. gas.

A Shot in the dark

EVEN A SHARPSHOOTER **has a tough time hitting the target** **if he can't tell where it is.** **That's the reason Lane-Wells developed accurate instruments** **for locating their gun-perforator in the casing. If you order** **a well gun-perforated at 4500 feet, the Lane-Wells crew** **shoots** **at that level. There is no possibility of premature firing** **because the percussion-proof cartridges** **are electrically controlled from the surface** **Lane-Wells safety set-up includes complete liability insurance** **against damage to property and life. If it's results** **you're looking for, call in a Lane-Wells crew**

Tomorrow's Tools Today

LANE-WELLS SERVICES AND PRODUCTS INCLUDE:

GUN-PERFORATORS
OIL WELL SURVEYS
DIRECTION CONTROL OF DRILLING WELLS
PACKERS—LINER HANGERS
BRIDGING PLUGS
Single-Shot Survey Instruments

IN CALIFORNIA

Lewis Knuckle Joints
Kinzbach Whipstocks and Mills

LANE-WELLS COMPANY

Technical Oil Field Services

GENERAL OFFICES AND FACTORY: 5610 South Soto Street, Los Angeles, California

ALEXANDER ANDERSON DIVISION
5610 SOUTH SOTO STREET
LOS ANGELES, CALIF.

GULF COAST DISTRICT
2002 WAYSIDE DRIVE
HOUSTON, TEXAS

MID-CONTINENT DISTRICT
2 N W 10TH ST.
OKLAHOMA CITY OKLAHOMA

EXPORT OFFICE - 420 LEXINGTON AVENUE NEW YORK CITY

Boom Revives Old K-M-A

By H. H. KING, District Editor

Wichita Falls, Texas.—A drilling boom within sight of the skyscrapers of the oil capital of the North Texas district is taking shape after a lapse of 6 years since completion of the first deep oil producer in the old K-M-A shallow district. Recent completion of flowing wells and a series of major extensions for the 3800-foot Strawn sand and sandy-lime horizon created a demand for protection leases. News of the play has attracted outside interests, and the area is now one of the most active trading centers in the state.

10 to 12 Square Miles

The deep zone promises to embrace an area aggregating from 10 to 12 square miles. There are 40 flowing and pumping wells which have a combined potential of about 15,000 barrels with a top allowable of 68 barrels daily. The daily quota was cut from 106 barrels to the latter figure on November 1 because of the slash in the allowable of the district.

A survey of field operations reveals 24 tests drilling and in process of completion, while derricks and rigs have been set up on 10 additional locations. Exclusive of these operations the field scored a record number of new locations the past week when immediate drilling plans were authorized for 13 tests.

Independents have taken the initiative in developing the field and currently are carrying on all the development work. A few majors participated in the early stages of development, and failed to make producers from outpost projects. The presence of prolific production had been discounted until recently, thereby resulting in a higher estimate being placed on the recoverable oil.

Numbers of leading independents in the district have avoided the area on the theory that the Strawn zone at this deep level would not be profitable. Estimates on recovery per acre average between 5000 and 6500 barrels. The uncovering of thicker saturated pay zones may result in an upward revision of the maximum yield per acre.

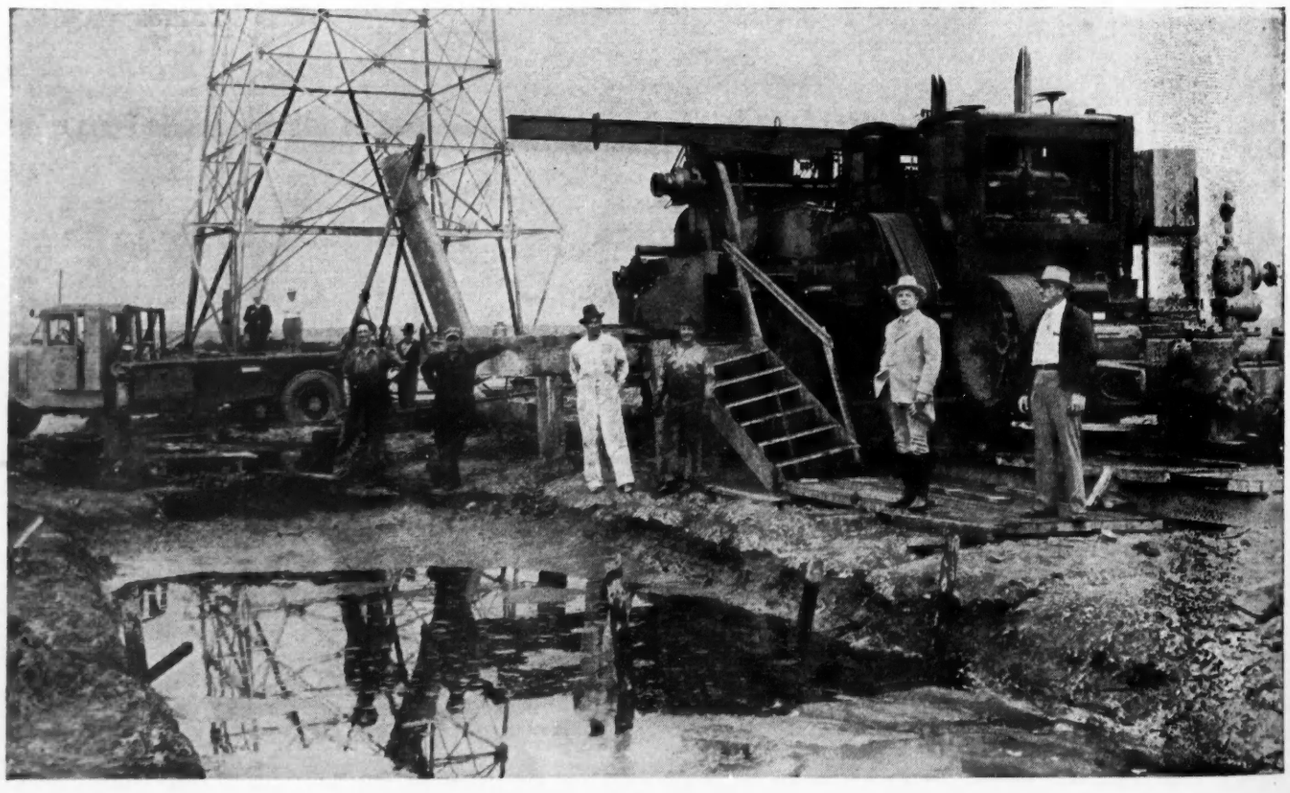
Rotary rigs are used exclusively in drilling to the top of the Strawn section, and with few exceptions well completions have been made with cable tools and machines. Approximately 100 feet of 10-inch pipe for surface casing and about 3700 feet of 7-inch casing for the oil string has become a standard program for the field.

Cost of completing flowing wells in the Strawn horizon varies from $20,000 to $25,000.

Three-Mile Extension

Production limits of the field advanced towards Wichita Falls the past week when W. H. Hammon and Hanlon & Buchanan Inc.'s Fassett-Tuttle 1, E. T. Ry. Survey A-76, filled 2000 feet with oil from sand at 4003-18 feet after drilling plugs. The well responded to 60-quart nitro shot with a flow of 152 barrels oil the first hour, then flowed 176 barrels in 16 hours while cleaning out cavings. Top of lime was logged at 3847 feet, or 2789 feet subsea. This outpost is located about 3 miles northeast of the old field and 2½ miles northwest of Clyde-Texan Oilfields Company and H. B. Hill's A. W. Burnsides 1, most easterly producer. The latter is credited with flowing by heads when agitated, and is being equipped with a heavy duty pump. It was shot with 130 quarts of nitro in saturated zone at 3936-61 feet after drilling in with rotary. Owners drilled the pay zone with 9-inch rock bit then cemented pipe. Burnsides 1 is located in the J. M. Sharp Survey, A-262, and logged top of the lime at 3801 feet, with an elevation of 1006 feet.

W. B. Omohundro et al's First National Bank 1, Block 28, KWVFL Survey, about 2500 feet northeast of the older section of the field, flowed 122 barrels oil in 2¼ hours after 450-quart nitro shot in saturated section at 3730-3850 feet. Top of lime was logged at 3663 feet, or 2652 feet sub-sea. Melat, Graham and E. J. Stump's Waggoner Brothers 1, about 2 miles northwest of deep production, failed to respond to treatment with 8000 gallons of acid



Removal of rotary used in drilling and completing the Clyde-Texan Oilfields Company and H. B. Hill's A. W. Burnside 1, east extension producer for the K-M-A deep zone, was temporarily halted for the above photo. A. H. Woodfin, manager of the company, and J. Krahenbuhl, operator, are shown on the extreme right.

solution at 3818-3949 feet, and will be shot with nitro. The hole carries about 3000 feet of oil. Top of lime was logged at 3710 feet, or 2695 feet below sea level. This outpost has been in process of completion for three weeks. The Bonner Company and R. O. Harvey's Munger 1, Block 31, was recently completed with an initial flow of 1000 barrels of oil in 18 hours after 320-quart nitro shot in broken pay at 3817-50 feet. Top of lime was called at 3698 feet, or 2682 feet sub-sea.

To Drill in River

Development of the Big Wichita River, which meanders through the widest portion of the field, will be undertaken shortly by King Oil Company. The latter purchased this river bed lease, and a 75-acre lease fronting the south bank of the small stream from Amtex Petroleum Corporation for $30,000 cash. The latter drilled a shallow pumper on the property. The lease covers about 512 acres, and was awarded by the state on a sliding scale royalty, based upon the monthly production of each well. Royalty payments can be increased to 31 percent of the gross production of a single well.

Bonus of $100 per acre cash and an equal amount payable from production was given by W. B. Omohundro et al for lease on the northwest 76 acres out of the W. W. Overby 194-acre tract, J. M. Sharp Survey, A-262. It is about one-half mile northwest of the most easterly production. Lease contract calls for development.

Magnolia Gets Protection

Magnolia Petroleum Company is one of the first majors to acquire lease protection in the face of advancing prices. This company is credited with paying an average price of $100 per acre, 50 percent cash, for a checkerboard spread, aggregating 400 acres. The acreage is to the south and west of the southwest extension producer.

Contract for the drilling of a test within two weeks was assumed by J. I. Staley et al in purchasing lease from the First National Bank, Wichita Falls, on the north 320 acres of the latter's fee in Block 44, KWVFL Survey, for a bonus of $10,000 cash and a similar amount due from production. It is on a strike between outpost producers to the east and northeast of the main field.

Construction work is in progress on Deep Oil Development Company's natural gas repressuring plant for the company's discovery lease in Block 30, KWVFL Survey. The plant will cost about $200,000, and was authorized before it became apparent that the field would receive a drilling boom.

Renewal of deep explorations in the Burkburnett area is under consideration by several independent groups. Ralph H. King and associates are assembling deep rights under a block of about 2000 acres for the drilling of a 4500-foot test. The block centers around the J. Hensley Survey, A-557, about five miles southwest of Burkburnett. Other parties are signing up mineral rights for the lower zone on acreage bordering the town on the south and west. Magnolia Petroleum Company and Continental Oil Company's H. Beach 1, about 4 miles southeast of the town, was abandoned in February, 1927, as a failure after drilling to 3501½ feet. It was located in an old shallow area.

EAST TEXAS

Rapid pressure drop causing concern in big field.

* * *

Deep test passing up gas on left flank to go deeper.

Kilgore, Texas.—Accelerated decline of the bottom-hole pressure of the East Texas field since the July survey requires drastic revision of the projected decline curve. Engineers have been crossed up by developments within the past three months in forecasting the arrival of the pumping stage for a large portion of the field due to the nose dive taken by their pressure curve.

Until the mid-year the average pressure registered a nominal drop each month. Normal trend of the pressure curve formed the basis of predictions that the average pressure would not dip below 1000 pounds per square inch until the latter part of 1941. The 1000-pound level is generally accepted as the critical stage in the natural flowing life of the field.

Aided by a sharp gain in salt water production and increased quota of completions on inside locations, the field recorded an average pressure decline of 13.38 pounds in August. Some doubt was held as to the accuracy of this check on the physical status of the reservoir, but a decline of 12.89 pounds was reported on the September 12 reading, and 12.77-pound loss the following month. On October 12 the average for the field was 1118.56 pounds per square inch which represents a slump of 39.04 pounds within three months.

Continuation of the decline rate maintained the past three months will lower average reservoir pressure to the artificial lift period within 10 months.

No relief is in sight for the fading pressure. Generous policy pursued by the Texas Railroad Commission in granting permits for the drilling of wells that are exceptions to the spacing rule made it possible for inside drilling to soar to a high point for the year early in November, with approximately 100 rigs in operation. The resultant completions automatically step up the volume of drainage. Production of water with the oil is gaining steadily, and no particular effort is being made to curtail this fluid withdrawal.

Further restriction of oil production from individual wells is improbable. The field is currently prorated to 483,800 barrels daily from 23,900 wells for an average yield of 20.3 barrels each. An act of the legislature places a minimum allowable of 20 barrels daily on wells in this depth classification. Wells incapable of making the marginal quota are not subject to production restrictions. Accounted for sub-marginal wells, according to commission's records, amount to 310, but private estimates place the actual figure at 2000. Production deficit by the latter is secretly made up from more productive wells on the same property, else from other leases.

Tyler.—Gas showing in the Lower Glen Rose encountered by Humble Oil & Refining Company and Gulf Oil Corporation's Robertson 1, deep prospect for the east flank of the East Texas field, has been passed up to explore the entire Trinity series. This deep prospect was coring at 6780 feet in dense lime, which showed little porosity. Formation tester used at 6562-78 feet yielded gas flow estimated at from a half to one million feet daily, and was the first encouragement the operators have received for production in the deep zone.

Stanolind Oil & Gas Company and Ramsey Petroleum Corporation's Norris 1, located on the Thornton fault, Limestone County, entered the Travis Peak section at 5523 feet, and was coring at 5530 feet. Pure Oil Company's Kendrick 16, Mexia field's deepest project, is fishing stuck drill pipe in lower marine series at 8847 feet.

Plugging orders have been issued for Sherman Hunt et al's Dillard 1, northwestern Henderson County Trinity test. After fulfilling depth contract in drilling to 6503 feet.

Two-stage cement job used on Tide Water Associated Oil Company et al's McElreath-Suggett 2-C, Opelika area, Henderson County, failed when 7-inch pipe was set at 9194 feet, and the crew is marking time. The hole was plugged back from 9320 to 9255 feet and showed high-pressure gas in the lower section of the Trinity. Pipe was set to gun perforate.

EAST TEXAS Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
Davis & Hart, W. B. Perry 6-A (176-ac)	2400	3632
Gulf, S. B. Stone 17 (107.68-ac)	500	3782
Haynes Oil Corp., J. T. Brown 12 (40-ac)	5400	3746
Humble, B. J. Bagwell 7 (40.7-ac)	7200	3685
W. B. Kee 15 (95.38-ac)	6500	3692
F. F. Wooster 10 (61.33-ac)	5600	3719
M. Wooster 11 (74.23-ac)	7000	3711
Jackson, Wise & Snedden, J. B. Wilson 12 (40-ac)	8800	3646
Alex McCutchin et al, H. Clay 7 (12-ac)	5000	3585
Sun, H. Schuyler 10-B (72-ac)	2400	3668
Trico Oil Co., R. A. Motley 5 (20-ac)	6200	3742

[Continued on page 100]

Company, Well and Location	Init. Prod. Bbls.	Depth
KILGORE AREA—		
W. L. Allen Oil Co., L. B. Morse 3 (2.77-ac)	7600	3620
Danciger, H. C. McNeely 8 (17-ac)	6000	3630
Devonian-Gulf, Motley 40 (442.1-ac)	8000	3702
Estelle Oil Co., I&GN Ry. 2, Tr. 1 (1.3-ac)	7000	3649
C. A. Everts Drlg. Co., J. H. Laird 7 (12-ac)	5000	3858
Gen'l Crude, L. Howard 8 (38-ac)	9700	3619
Gulf, C. Brown 46 (63.52-ac)	8500	3625
Erle P. Halliburton, Inc., W. D. Lacy 11-A (45.12-ac)	3000	3689
M. W. McVey et al, Kelly-Dickson 2, blk 137	2000	3540
Natural Pet. Co., J. H. Henderson 6 (42.7-ac)	96	3592
Overton Ref. Co., I&GN Ry. 17 (19.58-ac)	480	3561
Chas. Pettit et al, Solon King 3 (2.86-ac)	2500	3541
Potter Bros. et al, Dixie Mercantile 1, blk 153	208	3546
E. L. Smith Oil Co.-Lion, M. J. Register 7 (29¼-ac)	7000	3564
Sun, C. H. Hilburn-Loyd 30 (133.7-ac)	4200	3680
Ward Oil Corp., J. R. Beall 9 (79-ac)	3600	3683
LONGVIEW AREA—		
W. D. Ambrose et al, G. Jones 13 (20-ac)	9800	3650
Atlantic, G. A. Porter 24 (109.23-ac)	9300	3705
J. M. Tuttle 10 (58.17-ac)	10,000	3647
Atlantic-Sun, Wm. Anderson 16 (83.27-ac)	9000	3512
Barnett Pet. Corp., O. J. Phillips 8 (60-ac)	100	3721
Clark-Cowden Drlg. Corp., J. M. Christian 12-A (43-ac)	10,200	3663
Collins-Gray & Wolfe, C. Fisher 15 (134.67-ac)	2400	3434
FHE Oil Co., J. M. Christian 7 (7½-ac)	8000	3655
Gen'l. American Oil Co., A. J. Sanders 20-A (73.6-ac)	3600	3583
Gulf, J. C. Judge 87 (518.3-ac)	10,500	3502
Humble, M. Killingsworth 16 (99.7-ac)	8200	3575
Magnolia, Acey Christian 18-ABC (64.95-ac)	8800	3660
P. C. Castleberry 8 (40-ac)	8400	3617
Pete H. Pewitt et al, J. C. Porter 5 (66-ac)	1200	3705
J. C. Porter 6 (66-ac)	1000	3723
L. A. Williford 12 (133-ac)	1000	3654
B. F. Phillips et al, C. Everetts 8 (80-ac)	2000	3601
Red Star Oil Co., M. Lemaire 5 (23.4-ac)	10,000	3608
Shell, I. Moore 39 (303.7-ac)	6000	3570
Stanolind, G. Fenton 18-A (93.24-ac)	6500	3598
L. C. Ingram 13 (80-ac)	10,000	3595
M. Lemaire 8 (38.76-ac)	8000	3621
Sun, J. J. Reppond 6 (58-ac)	3600	3692
Texas Canadian Oil Corp.-Bert Ikler, J. R. Castleberry 2	120	3510
W. C. Turnbow Pet. Corp., J. C. McKinley 3 (15½-ac)	7600	3666
ANDERSON COUNTY (Cayuga)—		
Tide Water Associated-Seaboard Oil Corp., H. R. Rampy 3 (217-ac)	50	4088
ANDERSON COUNTY (Long Lake)—		
Alex McCutchin et al, W. V. Keeling 1 (10-ac)	750	5354
Tide Water Associated-Seaboard, Mrs. P. Smith 2 (87.78-ac)	¶100	5356
FRANKLIN COUNTY (Talco)—		
L. S. Flannery, Inc., J. L. Hedrick 8 (65-ac)	601	4305
G. M. W. Oil Co., O. E. Bolin 1 (12½-ac)	250	4323
Gray & Wolfe, O. E. Bolin 5 (36.95-ac)	359	4342
Humble, P. J. Dawson 4 (80.45-ac)	152	4325
Rotundi & O'Neal, O. E. Bolin 2-A (12½-ac)	324	4294
Stroube & Stroube, J. A. Hedrick 4 (65-ac)	482	4293
J. Z. Werby & Tune, T. J. Sanders 4 (45-ac)	259	4298
HENDERSON COUNTY (Cayuga)—		
F. M. Allison Prod. Co., Pettiette 4 (99¼-ac)	3200	4092
Cayuga O&G Co., A. G. Williams 5 (93.4-ac)	3000	4093
Westbrook Oil Corp., B. H. Wathen 3 (73-ac)	300	4111
TITUS COUNTY (Talco)—		
Mrs. Pearl F. Goodwin et al, T. A. Sims 2 (5.22-ac)	153	4299
Housh & Thompson, Inc., J. Hargrove 6 (75-ac)	424	4245
Lucey Pet. Co., I. N. Williams 9 (319.85-ac)	381	4386
Magnolia, C. W. Belcher 6 (80-ac)	310	4315

SOUTHWEST TEXAS

Hidalgo County 8000-foot production is in prospect.

* * *

Nueces County leads in new sands and wildcat strikes.

Corpus Christi.—Deeper sand explorations and wildcat operations share importance in South Texas Gulf Coast. Nueces County, as usual, was the leader in new discoveries and wildcat showings.

Mills Bennett Production Company's Hubert Johnson 1, in the South Clara Driscoll field, Nueces County, found a new sand at 5061-5110 feet in the Frio and showed enough oil to indicate a producer. There were three drill stem tests made at various points in the section, but none were sufficiently successful to warrant setting of casing. The test likely will be carried ahead and production attempt made at this level if lower zones fail to produce. This test showed another sand at 4791-4801 feet, also a new horizon for the field.

New Frio Sand

O. W. Killam's Betty Ellick 5, discovery well of a new Frio zone in the original Clara Driscoll field, flowed 37.8 barrels of 31.6 gravity crude in 6 hours on a potential test through 5/32-inch choke, tubing pressure being 1375 pounds and casing pressure 1700 pounds. The test found sand 4648-61 feet, drilled to 4690 feet, casing being set on bottom and perforated at 4652-61 feet.

Southern Minerals Corporation's Richard King 2, second wildcat drilled north of Agua Dulce, may open a new pool. The test, in Section 6, drilled to 6219 feet before plugging back to a 4000-foot sand. When originally drilled, the test recovered 690 feet of oil, 810 feet of salt water with 36 pounds working pressure in 20 minutes, the test being made at 4020-33 feet. The first well also showed some oil at this level.

Atlantic Refining Company's Porterfield 1-D, Aransas County, flowed 379 barrels of 39.5 gravity crude in 24 hours through 3/16-inch choke, showing pressures of 1175 pounds on tubing and 1475 pounds on casing. The well, producing from perforations at 7202-6 feet, opens a new and deeper sand in McCampbell field. The company's Porterfield 4-B found this sand originally, but was delayed in completion, hence the 1-D should be classified as the discovery. Porterfield 1-C, deepest test in the area, is going ahead below 8873 feet, having found salt water in sand at 8793-95 feet.

Jackson County's hot play, north of LaWard, has its first test nearing contract depth. Hargrove & Echols' Mike Strauss 1, A. N. Clare Survey, is in sandy shale at 5257 feet, showing a little gas.

H. J. Porter et al's Schmalsteig 1, important test 4 miles southeast of Sinton in San Patricio County, is an abandonment at 6505 feet.

Keeran field, Victoria County, received a failure on the southwest side of the producing area when Union Oil Company of California's C. A. Keeran was abandoned at 6004 feet.

Company, Well and Location	Init. Prod. Bbls.	Depth
R. E. Moore, Tr., Edwards 1-D (1.1-ac)	247	4290
Scott Bros. et al, W. T. Edwards 1-A (1-ac)	234	4283
RED RIVER COUNTY—		
Roy I. Carter Drlg. Co. et al, J. A. Tutt 1 (40-ac)	*	1360
CASS COUNTY (Rodessa)—		
American Liberty Oil Co., Maxie 5, Jno. Collum sur	140	5905
R. W. Norton, Starcke 3, D. Gilliam sur	130	6025
Starcke 4, D. G. Gilliam sur	160	6048
Union Producing Co. (United), J. T. Belote 4, H. Holbert sur	72	5982
MARION COUNTY (Rodessa)—		
Gulf Oil Corp., Lizzie Henderson 2, R. Bennington sur	740	6061

*Failbures; †Junked; ¶Million cu. ft. gas.

8000-foot field looms as wildcat tries to blow out

Mission.—South Texas' first 8000-foot field and third below 7500 feet in Hidalgo County appeared possible with Atlantic Refining Company's American Rio Grande Land & Irrigation Company 1 attempting to blow out. The well, however, was controlled and is coring ahead below 8147 feet. This well, 2½ miles southwest of Weslaco, found gas sand at 8044-50 feet, dry sand at 8050-64 feet, shale at 8064-86 feet, and sand at 8064-8147 feet. It found several distillate showings above this level.

The prospective field opener, several miles south of the deep La Blanca district, is in Farm Tract 784, Section 175, Llano Grande Grant.

La Blanca field was extended 3000 feet to the east by Dee Davenport et al's HCW&ID (No. 6) 1, which flowed

THE MARTIN-DECKER NAME *on a NEW instrument*

The Unitized MUD PUMP GAUGE

Here is the most rugged unit ever built for measuring slush pump pressures. It is strong, compact, and is engineered to give smooth, accurate readings of slush pump pressures under all conditions. It is unaffected by rapidly surging pressures or by circulating fluids, and is designed to withstand the extreme vibration of the slush pump. It is as easy and quick to install as a bull plug or swaged nipple, and just as easily moved from rig to rig.

It contains in one compact case Diaphragm Unit, Pulsation Damper and Indicator Gauge. The Diaphragm Unit, built for 5000 pounds working pressure, completely seals the mud out of the gauge mechanism, and the gauge and damper system is filled with non-corrosive, non-freezing fluid that assures accurate pressure readings under all conditions.

The built-in Pulsation Damper has an infinite range of adjustments which give smooth readings unaffected by pressure surges, yet allow instant sensitivity to actual pressure changes.

The Martin-Decker developed Vernier retard type Indicating Gauge combines extreme sensitivity with high capacity and is the most rugged ever built. On the 3000-pound unit, the first 1500 pounds are spread over 240 degrees of dial circumference, while the range of 1500 to 3000 pounds is compressed on only 60 degrees of dial circumference. An automatic retard device built into the gauge mechanism allows this Vernier arrangement, and gives extreme fidelity to low pressure readings and ample safety for high pressure operations.

Where a chart record is not required, where installation time is a factor, and where easy portability is essential, the non-clogging, non-pulsating Unitized Mud Pump Gauge, with its sealed-at-the-factory features, fill a long felt need!

THE WEIGHT INDICATOR

MARTIN-DECKER CORPORATION

LONG BEACH CALIFORNIA

San Joaquin Valley: A. F. McQUISTON, Bakersfield, California
Mid-Continent Distributor: REED ROLLER BIT COMPANY, Houston, Texas

HE UNITIZED MUD PUMP GAUGE

a large volume of gas and 5 barrels of distillate per hour through ½-inch choke under pressures of 2725 pounds on tubing and 3050 pounds on casing. It had sand at 7880-7960 feet, perforations being made in casing at 7906-16 feet with 20 shots.

SOUTH TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CORPUS CHRISTI DISTRICT		
ARANSAS COUNTY—		
Atlantic Ref. Co., L. L. Porterfield Est. 2-D, lot 8, blk 13 (McCampbell)	350	7228
Shasta Oil Co. & Philsan Oil Co., Jean Davis (4) 1, lot 16, sec 9 (McCampbell)	650	7130
CALHOUN COUNTY—		
Al Buchanan & Blanco Oil Co., Morris-Dunwoody 2, A. Sisneros sur (Heyser)	¶3 & 100	5607
Humble & Plymouth, P. H. Welder 17-B, A. Sisneros sur (Heyser)	850	5491
Portilla Drlg. Co., P. H. Welder 10-C, A. Sisneros sur (Heyser)	450	5485
DE WITT COUNTY—		
The Whitex Company, J. G. Kerlick 1, 990 ft nwl and swl of blk 1 of sw sub of Kerlick Lands, Marcus Sowell sur (Slick)	*	4453
HIDALGO COUNTY—		
Dee Davenport et al, Hidalgo County District 1, 280 ft sl, 30 ft el, center of lot 16, sec 95, but in sec 262 La Mestena gr (La-Blanca) perf 7906-16 ft	¶3 & 225	8005
KARNES COUNTY—		
Luling O&G Co., C. W. Boyce 8, S. D. Still sur (S. Burnell)	500	3659
LIVE OAK COUNTY—		
Reynosa Oil Co., B. A. Chestnutt 1, 2325 ft n of Frio river, 2105 ft wl of Luis Ayres sur	*	1254
NUECES COUNTY—		
Heep Oil Co., Ollie Purl 1, Ross Peters subd 2 (Agua Dulce) (perf 6335-39)	¶ 2& 100	6812
Houston Oil Co., T. M. Harrell 5-A, blk 28 (Saxet) (perf 4526-32 ft)	¶10	6998
T. M. Harrell 9-A, blk 24 (Saxet)	128	4537
Rand Morgan 29, sec 7, range 5 (Saxet)	250	4857
H. H. Howell, W. S. Hutchins 8, G. Frank sur 416 (Saxet) (perf 6248-52)	215	6964
Kepley Prod. Co., V. M. Donigan 8, sec 7, range 5 (Saxet) (perf 4072-74)	1500	4465
O. W. Killam, Betty Elick 5, sec 109 (Clara Driscoll)	640	4690
North Star Oil Corp., Rand Morgan 12-E, BS&F sur (Saxet) (perf 6702-10)	¶2 & 350	6941
Pan American Prod. Corp., J. Sagarino 2-B, CEIP&M sur (Saxet)	575	6915
Seaboard Oil Corp., James P. Luby, Canutillo Ditch Colony sur (Luby)	400	5063
Stanolind O&G Co., G. H. McCann 3, Canutillo Colony Ditch sur (Luby)	325	5099
Sun Oil Co., F. E. Flinn 1, sec 110, (S. Clara Driscoll)	140	3938
United Prod. Corp., T. S. Schroeder 1, A. F. de la Fuentes sur (Agua Dulce) (perf 6835-45)	¶5 & 275	8230
REFUGIO COUNTY—		
United Prod. Corp., W. J. Fox et al 20, Hews & Brown sur (Fox) (perf 6464½-72)	675	7305
SAN PATRICIO COUNTY—		
H. J. Porter et al, J. H. Schmalsteig 1, Coleman-Fulton Lands, 330 ft sl and wl, sec 9	*	6515
Sun Oil Co., D. I. Coggin 2, Geo. H. Pauls subd (Midway)	295	5345
VICTORIA COUNTY—		
Geo. Echols No. 1 W. H. Bennett, J. E. Galban sur (Heyser)	475	5763
Gulf Oil Corp., Claude A. Keeran et al 12, M. de Leon sur (Keeran)	975	5596
Sun Oil Co., W. N. Coffey 3, J. E. Galban sur (Heyser)	375	5746
SAN ANTONIO DISTRICT		
ATASCOSA COUNTY—		
Brown and Bell, G. C. Atkins 1, 330 ft se of nw, 990 ft sw of most sw'ly nel of 920-ac tr, BS&F sur No. 3, A-998 (4½ mi n Charlotte)	*	6004
CALDWELL COUNTY—		
Ellmag Oil Corp., Thomas Hardeman 1, Miles G. Dikes sur (Luling)	30	2202
Lanning and Coffield, A. Rodenberg 1, Guadalupe College sur (ne Luling)	90	2212
Martell Pet. Co., J. M. Young 1-E, J. R. Miller sur (Branyon)	105	2340
Marts & Beavans, Inc. et al, Mrs. J. W. Miears 1, 1835 ft nel, 150 ft sel (creek), 225-ac tr, W. C. Swearingen sur, just a Bastrop County line, 3 mi sw Red Rock, or 330 ft swl, 150 ft sel 27.27-ac lse, 20 ft nel 2930 ft nwl of survey	*	2300
GUADALUPE COUNTY—		
Diamond Half Oil Corp., Henry Willie 2, Jacob C. Darst sur (Darst Creek)	130	2642
Skivereen Oil Co., State of Texas 2, in Guadalupe River bed between Walton No. 1 Hoffman and Crouch No. 2 Getzke (Zoboroski)	†	2240
MIRANDO DISTRICT		
DUVAL COUNTY—		
Bridwell Oil Co., J. G. Anciro 5, Sweden subd, Santos Flores grant (N. Sweden)	320	4763
Conservative Oil Co., DCRC (Sun) (Humble) 3, Section 47 (Colmena)	¶2	1488
Cox & Hamon, O. W. Greene 29, BS&F sur No. 118 (Hoffman)	50	2699
O. W. Greene 31, BS&F sur No. 118 (Hoffman)	35	2740
Government Wells Oil Co., H. A. Lundell 10, HE&WT RR sur (Lundell)	115	1522
Magnolia Pet. Co., Emma (F. W.) Herbst 16, Villareal survey (Loma Novia)	*	4200
Labbe Ranch 10, Poitevent sur (Labbe)	35	2852
Navarro Oil Co., T. H. Couling (Owens) 3-A, Sweden subd, Santos Flores grant (N. Sweden)	650	4775
Reynosa Oil Co., F. G. Wilson et al 6, sec 9, Sweden subd, Santos Flores grant (N. Sweden)	500	4788
Rio Bravo Drlg. Co. & Geo. Coates, W. R. Peters 2-A, J. H. Gibson sur (Rancho Solo)	¶5	1845
Russ Pet. Co. et al, A. Farias 9, sec 9, Sweden subd, Santos Flores grant	575	4803
Mabel Rossi 2-A, sec 10, Sweden subd, Santos Flores grant (N. Sweden) pb td 4790	¶15	5370
Slaughter & Hugle, J. B. Hunter Est. 1, 330 ft sl, 330 ft el, 80-ac lse, sec 515, J. Poitevent sur, 1½ mi s&e Loma Vista production	*	4732
Taylor Refg. Co., Atlee Parr 1, sec 279, Parr Ranch (Thomas-Lockhart)	¶1 & 10	5162
JIM HOGG COUNTY—		
French Oil Corp., Paula V. de Garza 700 ft sl, 675 el, blk 1, sur 269	*	1063
McMULLEN COUNTY—		
Edwin M. Jones, Harry Ezzell 19, H. Russell sur (Ezzell)	147	1525
Harry Ezzell 20, H. Russell sur (Ezzell)	148	1529
Harry Ezzell 21, H. Russel sur (Ezzell)	224	1516
Harry Ezzell 4-B, H. Russell sur (Ezzell)	264	1542
Harry Ezzell 5-B, H. Russell sur (Ezzell)	268	1531
C. C. Shumway, Shiner Ranch 11, 330 ft nl, 330 ft wl of sec 6, Shumway subd, of Shiner Ranch and in G. J. Goode sur A-206	*	1887
WEBB COUNTY—		
Bridwell Oil Co., Maria G. Martin 8, sur 2167 (Oilton)	142	1906
Gypsy Oil Co., Maria G. Martin 3-A, sur 2167 (Oilton)	167	1914
Maria G. Martin 4-A, sur 2167 (Oilton)	151	1928
O. W. Killam, J. G. Garcia 1, 330 ft nl and wl of blk 26, Hughes subd of Ojuelos grant, 3 mi se Mirando City	*	3011
Magnolia Pet. Co., Sprague-Fee 2, sur 2161 (Oilton)	¶20	1878
Rowan & Hope, Inc., Laurell Bros. 7, sur 1006 (Oilton)	150	1923
Smith & Hamill, Maria G. Martin 20, sur 2167 (Oilton)	¶1 & 20	1885
ZAPATA COUNTY—		
Dulup Oil Co., I. G. Trevino 29, sur 412 (Escobas)	*	1115
Oil Country Pipe & Supply Co., P. Benavides 1, sur 11 (Andrews)	*	2312
The Texas Co., Whitehead 109, Cerrito Blanco grant (Escobas)	60	1245

*Failbures; †Junked; ¶Million cu. ft. gas.

Balcones fault wildcats having trouble completing

San Antonio. — Balcones fault zone wildcats showing for producers continue to encounter difficulties in efforts to complete. The district as a whole has shown a slight lull during the last several weeks with abandonments in unproven territory exceeding new operations.

Pagenkopf and Jamiseon's Houston Estate 1, discovery well of the Frio Town field in Frio County, is having trouble with the pumping unit. The test was reported to have been restored to production late in the week and was ready to make a gauge. It is in the Austin chalk at 2605 feet.

Important Test Delayed

Humble Oil & Refining Company's wildcat just east of Pearsall in Frio County will not be commenced before the first of the year, it is said. The company has a large block in this portion of the county, has done considerable geophysical and geological work, and has made a number of core tests. Titles are understood to have been cured on the block, one of the most interesting prospects in this part of the district.

Wellington Oil Company was continuing its pumping tests on Chittim 1, discovery well of the Edwards lime area east of the Chittim field in Maverick County. No gauges are yet available.

Kindorr Exploration Company is preparing to make a production test in M. Stidham et al 1, on the Jones Prairie Prospect, northeastern Milam County, where the company has an 8000-acre block. The test had Pecan Gap at 1492-2231 feet, topped Austin chalk at 3072 feet, Eagleford shale at 3230 feet, and Edwards limestone at 3765 feet, being bottomed in that formation at 3816 feet. A drill stem test from 3754-77 feet netted 65 feet of fluid, but no oil shows. Cores, however, did carry stains.

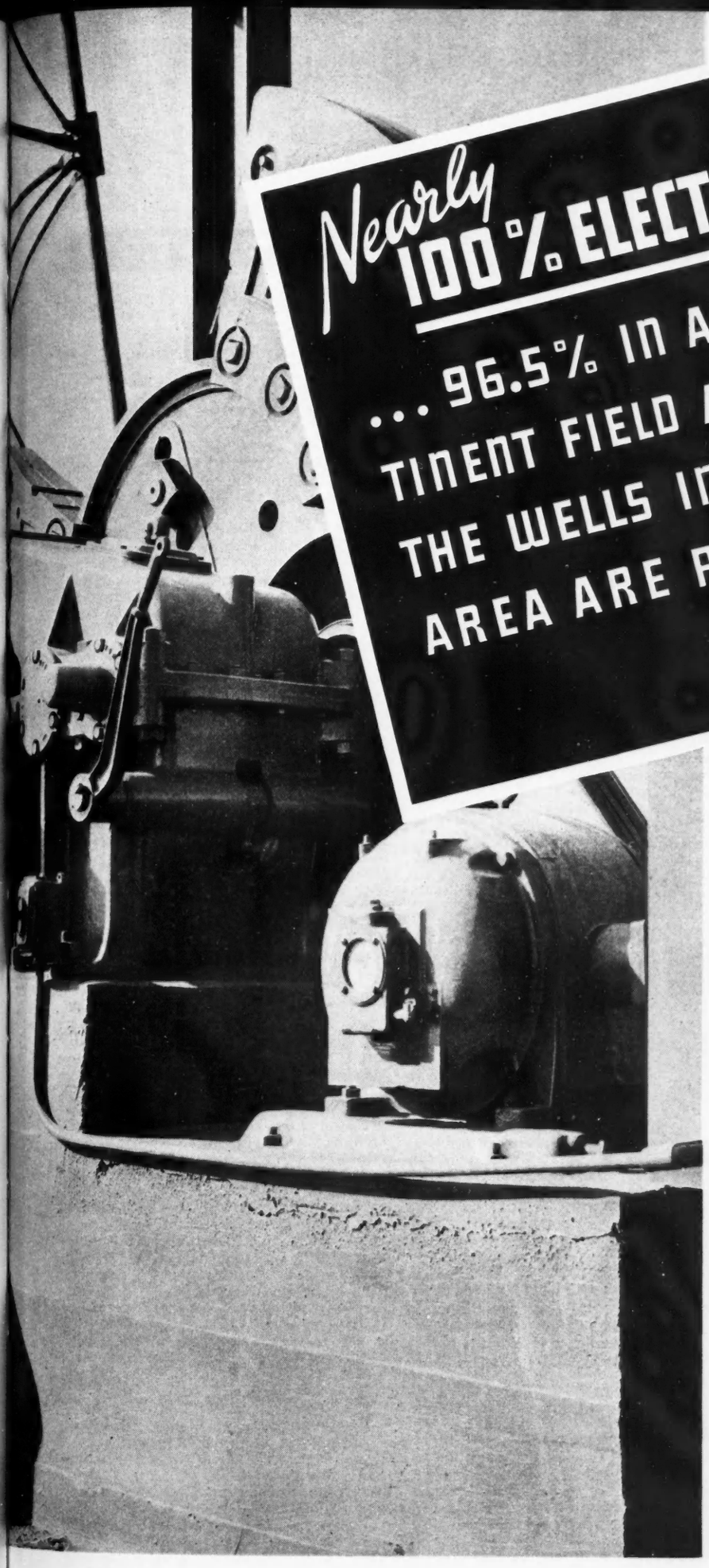
Test is opening Cole sand production in Seven Sisters

Laredo.—Minor extensions to several Mirando District fields provided the key happenings during the past week. At the same time, key wildcats found salt water in prospective producing sands, reducing the possibilities of the prospects they were attempting to prove.

Wellington Oil Company's J. F. Welder Heirs 8-D, Section 381, and on the extreme west side of the Seven Sisters field, Duval County, had drilled plugs and was testing. The well is opening oil production in the Cole sand in this field. It found the sand at 1710-20 feet and on a drill stem test at 1714-20 feet flowed pipe line oil in seven minutes under 50 pounds working pressure. This field is producing at depths ranging from 1525 feet to 2850 feet in the Frio, Chernosky, Government Wells, Loma Novia and Mirando sands.

Hoffman Extension

Cox and Hamon's Cuellar Brothers 1, nearly one half mile south of Hoffman field, and in Section 117 of Duval County, flowed 75 barrels of oil per day through ½-inch choke with a casing pressure of 380 pounds. The test, which has an elevation of 668 feet, topped Government Wells sand at 2693



Nearly 100% ELECTRIFIED!

... 96.5% IN A MID-CONTINENT FIELD AND 90% OF THE WELLS IN GULF COAST AREA ARE PUMPED BY—

Purchased ELECTRIC POWER!

The reason for such complete acceptance and use of Purchased Electric Power is obvious—it is **more efficient** and **dependable** . . . and costs less in the end. If you want to **increase** your **profits,** ask your Electric Power Company for information concerning the advantages of Purchased Electric Power!

GREETINGS A. P. I. MEMBERS!

PROFIT! BY USING Purchased ELECTRIC POWER

PETROLEUM ELECTRIC POWER CLUB

feet, topped oil show at 2710 feet, and is bottomed at 2714 feet.

Joe Gier and Kone Production Company's W. R. Peters 2 topped Mirando sand at 2602 feet and was coring below 2620 feet, the horizon showing mostly gas, but some oil. This well is in SE SW Section 38, one mile northeast of the oil production in Mirando sand in the Peters field.

Interest in North Sweden field centers around the new Cockfield sand development in the western portion of the producing area. The sand, while thus far limited in proven area, does give promise of being a rather important producer.

Four miles northwest of Benavides, Magnolia Petroleum Company's D. Ruiz 1, Section 190, and on general trend with the Sweden area, is rather disappointing. It is coring below 5190 feet, having found salt water sand at 5119 feet.

Adams and Lefevre have commenced an interesting test in McMullen County, being M. Selman 2, Section 58, and 2000 feet southwest of Selman 1. The first Selman test found considerable oil in the 2500-foot Government Wells sand and the second is looked upon as a likely producer. If so, it will open a new pool in southeastern portion of the county.

J. B. Blanchard et al are drilling the first Bruni sand test in the Oilton field of Webb County. Laurell Brothers 2, at the extreme southeast side of the producing area, is going ahead below 2425 feet. It originally tested salt water in Mirando sand, field's regular zone.

TEXAS GULF COAST Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
AMELIA—		
Humble, Tyrell Combest 19	612	6780
ANAHUAC—		
Humble, Clark 17	622	7085
BIG CREEK—		
R. Y. Walker, Bryan 3-A	231	3107
CALL—		
Houston Oil Co., Pevey Moore 2	*	7232
DICKINSON—		
Humble, Maco Stewart A-5	218	8980
FAIRBANKS—		
Amerada-Stanolind, Carpenter 3	600	6834
FANNETT—		
Gulf, Burrell 9 (wo)	125	4265
FIVE CORNERS—		
Texas Co., Pierce Estate B-10	¶2½	5480
HARDIN—		
Jack Frazier, Buffam & Benning 1	*	7696
HASTINGS—		
Humble, South Texas Grain Co. 8	405	6100
Pearland Oil Co., Alexander 2	620	6091
Stanolind, Condon 2	548	5825
Curkeet B-12	552	6080
Curkeet B-14	557	6080
Edwards 6	504	6080
Matsushita 3	480	6020
Ramley 2	616	6080
Turner 14	480	6072
Turner 17	544	6080
H. C. Cockburn, Barnes 1	*	6368
PLEDGER—		
Humble, Norton 1	¶10	6790
PICKETT RIDGE—		
Gilcrease Oil Co., Duson 1	120	4693
SOUTH COTTON LAKE—		
Humble, Casey 1	150	6519
WEST BEAUMONT—		
Glenn H. McCarthy, Longe 6-A	235	5905
Stanolind, Keith 1	116	5400
McCormick 7	360	5396
LIBERTY COUNTY—		
Humble, Sabine Tram 2, Devers area, M. Whittington sur	*	9515
TYLER COUNTY—		
Thompson Dr. Co., Kountz 1, ne of Rockland, E. Smith sur	*	1507

*Failures; †Junked; ¶Million cu. ft. gas.

TEXAS GULF COAST

Orange outpost may revive drilling on west flank.

* * *

Extension well at Segno produces from new sand.

Houston. — Revived drilling on the southwest flank of old Orange field, Orange County, was anticipated last week because of the showing of Frio oil and gas in Tillery & Ryan's A. Chesson 1, William Dyson Survey, approximately ½ mile southwest of production.

Chesson 1 was drilled to 5946 feet after sand showing oil logged at 5931 feet showed 8 ohms on an electrical logging device. A drill stem test was made with the seat of the testing tool at 5910 feet, but it slipped to 5940 feet. The testing tool was open 8 minutes, and after closing it the well started flowing in 2 minutes. It flowed by heads for about 1 hour, spraying oil to the fourble boards. When the crew pulled the drill stem out of the hole, about 17 stands were recovered; 12 were clean 33.8 gravity oil and 5 were sand and oil. The test was made with a ⅜-inch choke on top and a ¼-inch choke on bottom of the testing tool. Casing will be set for a production test. Chesson 1 logged top of Marginulina at 5720 feet and then drilled to Frio formation.

On the east flank of Orange, Glenn H. McCarthy made location for Brown Estate 1, 1399 feet east of the west line and 466 feet south of the north line of a 178-acre tract in the Bradley Garner Survey.

New Sand in Segno Outpost

South of production at Segno, Polk County, Gulf Oil Corporation made a production test on Wing 8 in a new formation. Casing was perforated with 10 shots from 6259 to 6263 feet and the well came in flowing 531 barrels of fluid in 12 hours, 50 percent salt water and 50 percent oil, through a ⅜-inch choke. Tubing pressure was 1650 pounds and casing pressure was 2200 pounds. The oil tested 44 degrees. Cement is being squeezed through perforations preparatory to another test. Wing 8 cored over 1200 feet of broken formation down to 6755 feet showing oil, gas, distillate and salt water. Over 41 drill stem tests were made on the extension well below the regular producing horizon at Segno.

The first disappointment for the new Call field, Newton County, was Houston Oil Company's Pevey Moore 2, 1000 feet northeast of the discovery well, H. & T. C. Survey, Section 42. The hole was abandoned at 7372 feet after logging salt water sands in the regular producing horizon. A drill stem test was made at 6908 to 6918 feet and showed 27 stands of salt water.

Houston Oil Company made location for Sabine Tram 2 after abandoning Pevey Moore 2. It is 2159 feet west and 933 feet from the discovery well in H. & T. C. Section 37, Newton County.

Cook Mountain Test Abandoned

In Liberty County, Humble Oil & Refining Company abandoned Sabine Tram 2, M. Whittington Survey, after drilling to Cook Mountain formation at 9515 feet. No showings of oil were reported. Top of Cook Mountain was logged at 8775 feet. The company made location for G. A. Moore 1, 1500 feet from the southeast line and 1500 feet from the northeast line from the north corner of the R. Schearer tract in the M. Whittington Survey, Devers area, Liberty County.

In the Cedar Bayou area, Chambers County, Ingot & Merit Oil Company's Wright 1, C. Smith Survey, was preparing to make a drill stem test at 6437½ feet at the close of the week after perforating casing from 6424 to 6437½ feet. Last week casing was perforated with 8 shots from 6434 to 6439 feet, and a drill stem test showed 25 feet of oil, 800 feet of salt water, and 200 feet of sand and mud. Cement retainer was set at 6410 feet and 100 sacks pumped through the perforations.

South Cotton Lake Extended

South Cotton Lake field, Chambers County, was extended slightly south last week by the completion of Humble Oil & Refining Company's Casey 1, B. Winfree Survey. It made 150 barrels daily through ¼-inch choke. Tubing pressure was 900 pounds and casing pressure was 800 pounds. Casey 1 cored oil sands from 6510 to 6519 feet; 7-inch casing was set at 6509 feet.

Sun Oil Company made two new locations at Seabreeze field, Chambers County, last week after completing the first commercial oil producer the previous week. Broussard Hebert 2 is in the T. & N. O. Survey, Section 127, and Hoffman 1 is south of Acom 3, the first oil well. Sun also announced a wildcat location on the Bolivar prospect in Galveston County. Cade & Company 1 is 466 feet each way out of the north corner of the A. Dickson Survey, Abstract 51.

Extends Pledger Gas Area

Gas production at Pledger, Brazoria County, was extended 1¼ miles east when Humble Oil & Refining Company completed G. W. Norton 1, Grey & Moore Survey, at 6790 feet. There was no estimate on how much gas the well was making, but the shut-in pressure was 2025 pounds on the tubing and 1750 pounds on the casing. The gas was flowing through ¼-inch choke.

"You Have Something There"

Summing up the thousands of opinions expressed about the NIXON SURFACE CONTROL GAS-LIFT SYSTEM, at the recent Oil-World Exposition, we are convinced this new proven, economical method of raising fluid is destined to revolutionize pumping practice.

Its simplicity — its dependability, its records for raising more fluid at less cost — its control of the amount of fluid taken — its conservation of gas volume — its saving in lease maintenance cost, are but a few of its advantages that interested the thousands who visited the oil show.

If you were not among those who saw it at the show, ask us to send you the book — "There's Something New Under the Sun." It gives complete details of the Nixon Surface Control Gas-Lift System.

Casing 5 in.; Tubing 2 in.; Operating Pressure 300 lbs.; Well Depth 2200 ft.; Operating Depth 1325 ft.

NIXON SURFACE CONTROL GAS-LIFT SYSTEM is made for and Sold Exclusively by

NIXON Surface Control GAS-LIFT SYSTEM

WILSON SUPPLY CO.

1412 MAURY ST., HOUSTON, TEXAS

Exclusive Gulf Coast Distributors for: Wilson-Snyder Pumps; American Cable Tru-Lay Pre-formed Wire Rope; Kewanee Boilers; Sievers Reamers; Drift Meter Jr; Gray Swivel; Nixon-Ferrill Gas Lift; Nixon True-Taper Slip and Spider; Bowen Pack-Off and Releasing Drill Pipe Overshot; Douglas Weight Indicator

OIL AND GAS WELL SUPPLIES

Branch Stores—Barbers Hill, Kilgore, Gladewater, Talco, Bay City, Victoria, Pierce, and Corpus Christi, Texas. Lake Charles, New Iberia and Rodessa, Louisiana.

Sales Offices—Tulsa, Oklahoma; Dallas, Texas; Shreveport, La.

Norton 1 topped the gas sand at 6751 feet and set 5½-inch casing at that depth.

Hastings field, Brazoria County, was defined on the north last week when H. C. Cockburn and W. K. Womach's Barnes 1, W. D. C. Hall Survey, was abandoned at 6368 feet in salt water sand. Top of the sand was logged at 6328 feet. The well is approximately 1 mile from production.

Ten producers were completed at Hastings last week and the area is still the most active field in the Gulf Coast. There has been an average of 10 oil wells completed in the field each week. At the end of the week there were 10 wells at Hastings down to the producing sand and due for completion the coming week.

Harrison & Abercrombie fished 1000 feet of pipe out of Smith 1, Old Ocean field, C. Breen Survey, Brazoria County, and at the end of the week set 5-inch casing at 10,630 feet. Cement plugs will be drilled soon and a production test made.

New Sand Near Pickett Ridge

Gilcrease Oil Company's Duson 1, a farm out of Tide Water Associated Oil Company, southeast of production at Pickett Ridge field, Wharton County, made 120 barrels of 24 gravity oil daily through 10/64-inch choke, with tubing pressure of 390 pounds and casing pressure of 460 pounds, from a new sand at 4689 to 4693 feet.

At Palacios field, Matagorda County, Sun Oil Company's Bayshore 1, L. Goodwin Survey, was drilling at 11,111 feet in shale. It is the deepest active well in the Texas Gulf Coast at present. Continental Oil Company's Robbins 2 at Citrus Grove, Matagorda County, went to 11,612 feet before it was abandoned.

SOUTH LOUISIANA

Well removes Abbeville from gas-distillate class.

* * *

Quarantine Bay strike is second for Gulf in year.

Lake Charles.—Abbeville, Vermilion Parish, heretofore classed as a gas and distillate producing field, was converted into an oil field November 3 when Continental Oil Company's Brookshire 1, Section 66-12s-3e, came in flowing 61 barrels of 41.5 gravity oil in 4 hours from 7890 feet to extend the field 1000 feet east and discover a new sand.

Drilled to 11,909 feet, where a gas and salt water sand was logged, the well blew out making an estimated 15,000 barrels of salt water daily. After killing the well the drill pipe was found to be stuck. Brookshire 1 was cleaned to 11,190 feet and plugged back. Casing was perforated from 10,935 to 10,943 feet with 18 shots, resulting in a salt water yield. The hole was then plugged back and cement drilled out to 7895 feet. Casing was then perforated with 18 shots from 7884 to 7890 feet. Flow was through a 3/16-inch choke, with a tubing pressure of 1800 pounds and a casing pressure of 2500 pounds. The oil showed 5 percent basic sediment and water. It was also making an estimated 1,000,000 cubic feet of gas daily.

Record String of Casing

Continental set a string of 7⅝-inch at 11,316 feet in Brookshire 1, this being the longest of that size casing ever set.

Abbeville was discovered March 14, 1937, when Continental's Hebert 1 was completed in sands at 7666 to 7675 feet, making 25 barrels of distillate daily. Hebert 1 was drilled to 12,216 feet before it was plugged back to the producing horizon.

Gulf Hits Again

The second oil field discovered in the Louisiana Gulf Coast by Gulf Oil Corporation this year is at Quarantine Bay in Plaquemines Parish. Although neither of the discovery wells is flowing into storage tanks, they have

One tour of the crew that completed Continental Oil Company's Brookshire 1, Abbeville area, Vermilion Parish. From left to right: H. T. Tarvin, driller; S. M. Sullivan, derrick man; T. A. Key, fireman; G. D. Cardwell, helper; S. N. Cherry, helper, and M. J. Gadenhead, mudman. Well plugged back from 11,909 to 7884-90 feet flowed 61 barrels first 4 hours through 3/16-inch choke, opened new sand and extended field.

shown evidence of commercial production by drill stem tests. A string of casing will be set below the new producing sand and cored deeper.

Gulf Oil Corporation's State QQ 3, Section 17-19s-17e, drilled deeper.

The well was drilled and cored to 8144 feet in shale. Sand showing oil was cored from 8134 to 8143 feet. On an electrical logging device it registered 11 ohms. With the seat at 8127 feet, a testing tool was open 12 minutes, and 1500 feet of 34.3 gravity oil, 150 feet of sand, 100-pound pressure, and no salt water were recovered through ¼-inch chokes. A string of 9⅝-inch casing was set on the shale formation at 8144 feet. The oil sand has been described as Miocene.

Using for Geophysics

The first oil strike in South Louisiana this year by Gulf Oil Corporation was at Timbalier Bay in Lafourche Parish, where after making two drill stem tests which showed commercial oil, State P. P. 3, Section 36-23s-21e, was drilled to salt, establishing a new salt dome. Last week the crew was working with geophysical instruments in the hole at 8728 feet in salt. After the geophysical work is completed, the hole probably will be plugged back and sands showing oil will be tested at either 6750 or 6820 feet. The first drill stem test at 6750 feet showed 1000 feet of 32 gravity oil, and the second test at 6820 feet showed 2520 feet of 31 gravity pipe line oil. Neither of the tests showed salt water.

Another Passes Up Sand

Another new discovery in South Louisiana is following the procedure of Gulf Oil Corporation by setting casing below the producing sand and drilling deeper. Amerada Petroleum Corporation and Louisiana Land & Exploration Company's South Coast Corporation 1, Raceland area, Section 34-15s-19e, Lafourche Parish wildcat, logged sand showing oil at 7238 to 7276 feet. It showed 155 millivolts and 4 ohms on an electrical logging device. Nine and five-eighths inch casing was set at 7642 feet. The well was reported coring in shale at 9100 feet.

A new producing sand may be discovered at Lake Long field, Lafourche Parish, in Fohs Oil Company and Pilgrim Exploration Company's State 3, 1320 feet north of production. Last week the extension well logged a "No. 2 sand" at 9537 feet and a test showed salt water. However, the salt water showing did not discourage the operators as they have plugged the hole back to 9477 feet and will redrill into the sand and not into the portion showing salt water. State 3 also cored sand and shale in the regular producing horizon and set 7-inch casing at 9477 feet.

Tide Water Associated Oil Company's Manhatten Fruit Company 4, Venice field, Section 26-21s-30e, Plaquemines Parish, was drilling in lime at 7233 feet below the regular producing horizon at the end of the week. It is reported the well logged sand from 7120 to 7150 feet and from 7150 to 7155 feet, about 70 feet higher than the discovery well, but that the sand did not carry the saturation the discovery well did.

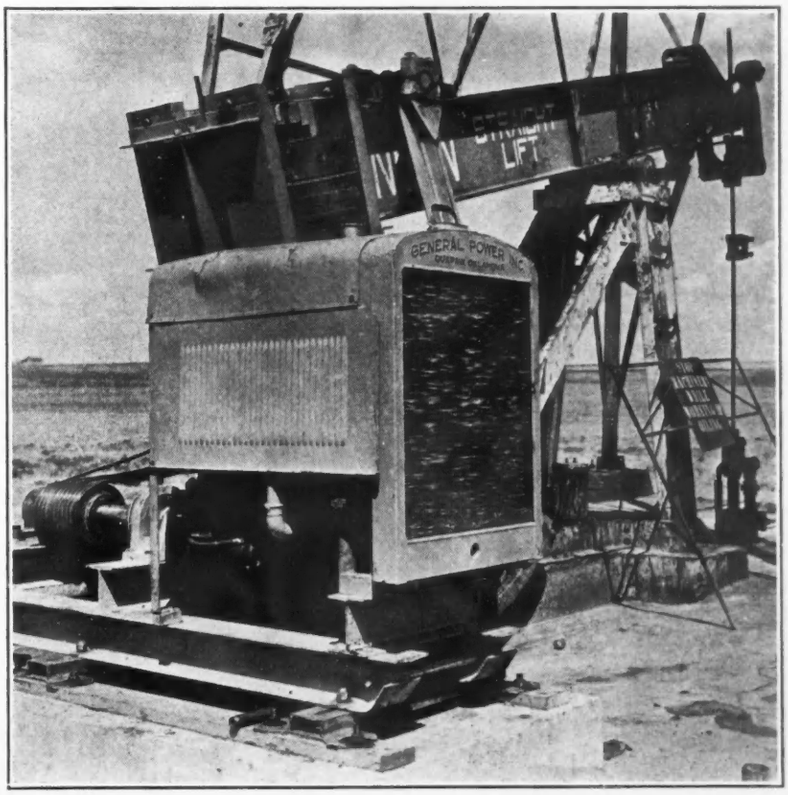
Humble Oil & Refining Company made five locations at Potash, Plaquemines Parish, last week, after abandoning two shallow dry holes. The company is core-drilling salt dome for geological information. One well there is producing a small amount of oil.

Humble Oil & Refining Company was waiting on cement to set in Cockrell Moran 25, Lake Washington field, Sec-

SOUTH LOUISIANA
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BOSCO—		
Superior, Larcade 1	*	8894
CAILLOU ISLAND—		
Texas Co., State 52	440	3768
CHARENTON—		
Pan American, South Coast 2	*	6661
DARROW—		
Humble, Community 16	*	5838
GIBSON—		
Shell, Pelican 3	500	9506
JENNINGS—		
Ladak Oil Co., Jennings Clement 2	250	2055
Superior, Jennings Heywood 4	388	6500
NEW IBERIA—		
Wm. Helis, Bulloch 6	550	4010
Texas Co., Duhe 4	434	4607
POTASH—		
Humble, Orleans Levee Board 7	*	1285
Orleans Levee Board 8	*	950
STARKS—		
J. R. Turnbull, Industrial Lbr. Co. 2	*	4861
ST. MARTINVILLE—		
Tide Water Associated Oil Co., Smedes 1-D	*	8999
VINTON—		
Vinton Pet. Co., Vincent 23	35	3256
WHITE CASTLE—		
Shell, White Castle Shingle 5	642	6444
VERNON PARISH—		
Castor Creek Dr. Co., Llano Del Rio 1, 34-2n-9w	*	lcn.

*Failures; †Junked; ¶Million cu. ft. gas.



Get Ready for Winter!

Check power equipment now! Winter weather always takes its toll in shut-down time, deterioration of equipment, and loss of production. Replace with General Power Conversions.

NOTICE

If your local, authorized Ford dealer cannot supply you with information concerning these units, please send us his name along with your request.

General Power Conversions are all powered with the dependable Ford V-8 Engine, and are available in single, dual, triple, and multiple units for drilling, pumping, and generating. Write for detailed information.

GENERAL POWER CO.

QUAPAW, OKLA. PHONE 64

tion 35-20s-26e, at 6372 feet after setting 7-inch casing at that depth. A sand was reported logged from 6337 to 6356 feet. If this sand produces oil, it will be a new horizon for the old field.

Lafitte, Jefferson Parish, was extended three-fourths miles east last week when The Texas Company's State Bayou Norman 1, Section 28-17s-24e, came in flowing 1730 barrels of 37.7 gravity pipe line oil daily through a ⅜-inch choke with a pressure of 1590 pounds after casing had been perforated with 140 shots from 9530 to 9630 feet in Miocene formation.

State Bayou Norman 1 was drilled to 12,115 feet and a new sand encountered at 12,069 feet blew out. Drill pipe was stuck and after washing down below 11,000 feet the hole was plugged back and completed as a producer. There have been no dry holes at Lafitte to define the field in any direction.

After working the southeast flank of Roanoke field, Jefferson Davis Parish, with reflection seismograph, Superior Oil Producing Company made location for O. E. Ferguson 1, 660 feet south and 330 feet east of center of Section 13-9s-4w.

Shell Petroleum Corporation announced location for Katherine Bel Hanszen 1 in the Chalkley area, Cameron Parish. It is 1320 feet north and 2200 feet east of the southwest corner of Section 22-12s-6w.

Union Sulphur Company's J. O. Hebert 2, Big Lake area, Section 18-12s-8w, Cameron Parish, was coring sand at 8517 feet after logging a gas sand at 8385 to 8447 feet and sand showing oil at 8447 to 8463 feet.

DR. HUGO SCHENK, Leland Stamford University, California, has been granted a year's leave of absence to help in delimitation of potential oil bearing structures in northeast Iran by a study of fossil remains in the strata.

NORTH LOUISIANA

Lisbon production extended in three directions.

* * *

Marion County well makes higher initial flow.

Shreveport. — The twenty-third and best well so far completed in the Marion County, Texas, offshoot of Rodessa, was added last week in Gulf Oil Corporation's Lizzie Henderson 2, R. Bennington Survey, near Jefferson. It gauged 740 barrels of oil in 24 hours through ⅜-inch tubing choke from 6061 feet, Gloyd horizon. Casing pressure was 1390 pounds, and tubing pressure 360 pounds. With an elevation of 272 feet, this test logged Henderson sand from 6023 to 6043 feet and topped the Gloyd formation at 6043 feet.

George Barham's W. C. Whitfield 1, R. Bennington Survey, ¾ mile northwest outpost which showed oil in the Henderson sand but was deepened to the Gloyd was testing at 6105 feet. This test, with an elevation of 298 feet topped the Henderson at 6074 feet and the Gloyd at 6096 feet, setting 5½-inch casing at 6094 feet to shut off the Henderson sand to prevent a gas-distillate well. There are 20 active operations in Marion County, including 15 drilling operations.

Cass County, Texas, added four small producers last week and activity is waning in that county as producing limits appear fairly well defined. Only six wells are actively drilling in Cass County, aside from those completed last week, although there are five other locations classed as "active."

New Caddo Parish Activity

The Caddo Parish, Louisiana, side of Rodessa added two producers last week with 13 active operations including three locations and two derricks. Recent developments in Arkansas have caused new locations to be made in Sections 1 and 2-23n-16w, these two sections now having 10 of the active operations. Freeman W. Burford's Pitts 1, C E½ NW 1-23n-16w, tested estimated 10,000,000 feet of gas at 6060 feet after being plugged back to 6010 feet and perforating casing at 5993 to 6008 feet. Apparently an edge well on the north, Magnolia Petroleum Company's M. S. Atkins 4, SW SE 7-23n-15w, was shut down at 6060 feet after testing 40,000,000 feet of gas at 5762 to 5800 feet, testing dry at 6051 to 6058 feet, and then showing 100 feet of oil and 700 feet of salt water at 6051 to 6060 feet; elevation is 276 feet.

Three Lisbon completions extend field three ways

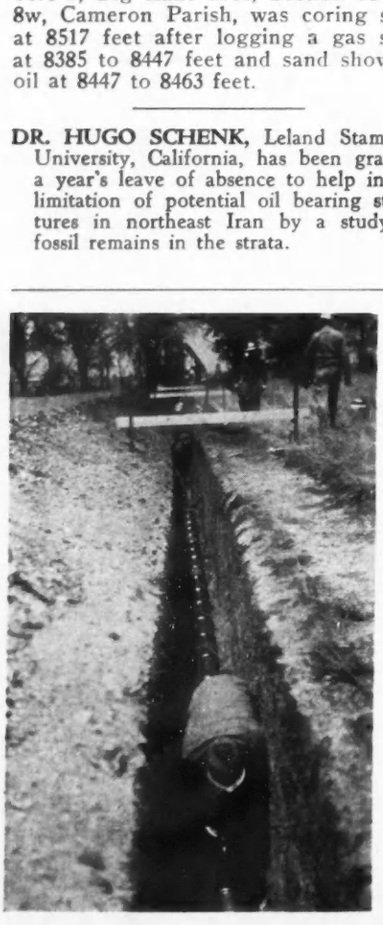
Shreveport.—Four wells were completed last week in the Lisbon field to boost the total of producers there to 142. Three of the new wells extended the producing limits slightly in as many directions.

A south edge well was completed by R. L. Bauman in C. S. L. Patton 2, CS½ SW NE 1-20n-5w, flowing 97 barrels per hour from 5368 feet, through ⅛-inch choke, with casing pressure 200 pounds and tubing pressure 250 pounds, after using 4000 gallons of acid. Fifteen feet of porosity was logged just above 5366 feet; elevation was 345 feet.

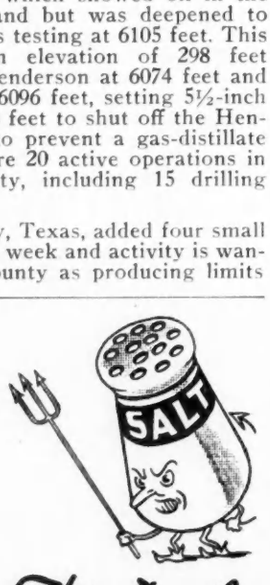
Slightly outside production to the northwest A. O. Olsen and associates' H. W. Patton Estate 1, C S½ SE SE 26-21n-5w, was completed at 5273 feet flowing 20 barrels per hour through ⅛-inch choke after acidizing. This test had only three feet of porosity just above 5265 feet. The porous horizon "pinches out" in this direction.

On the east side of the field the same operators' T. F. Patton A-4, CN½ SE SW 30-21n-4w, was completed flowing 83 barrels per hour through 1-inch choke at 5197 feet after logging porosity from 5183 to 5189 feet.

On the Lincoln Parish side of the field a slight east extension was added



A 6-inch salt water line being laid in the Lorraine, Kansas field. Entire job is 18,000 feet.



This Devil Can't Destroy

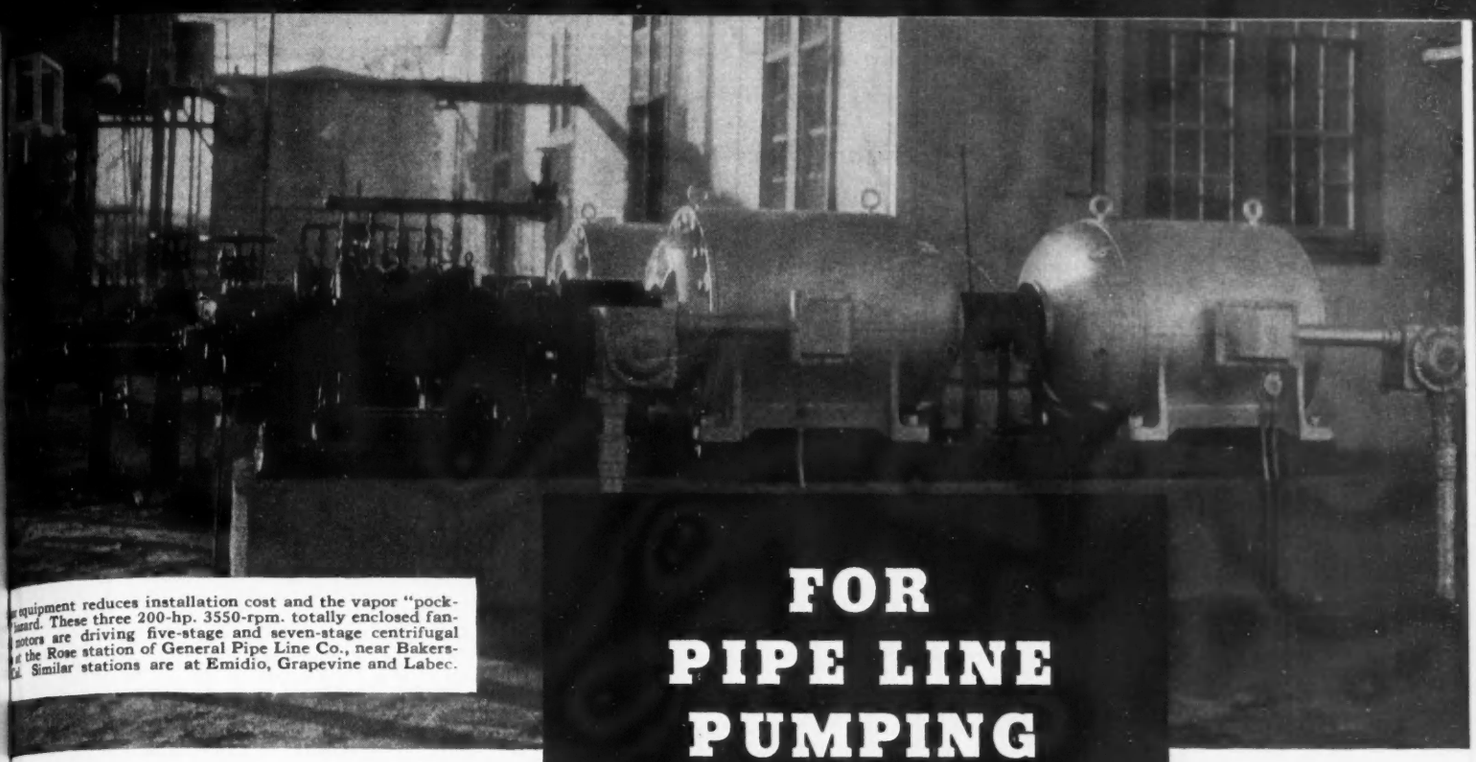
DICKEY
ACID-PROOF PIPE

Saves 50% On Salt Water Disposal Lines

Solve your salt water disposal problems with Dickey Vitrified Salt-Glazed Clay Pipe and Asphalt Compound Joints. They make a connection that costs at least 50% less than other practical materials . . . that is acid-proof, impervious to salt or chemical action, will not corrode or disintegrate and lasts indefinitely.

Dickey Acid-Proof Pipe is always available in 4 to 24-inch sizes. Shipments made promptly.
ASK FOR AMAZINGLY LOW PRICES!

W. S. DICKEY CLAY MFG. CO., Texarkana, Tex.-Ark.



...r equipment reduces installation cost and the vapor "pock-...hazard. These three 200-hp. 3550-rpm. totally enclosed fan-...motors are driving five-stage and seven-stage centrifugal ...g the Rose station of General Pipe Line Co., near Bakers-...Cal. Similar stations are at Emidio, Grapevine and Labec.

FOR PIPE LINE PUMPING

...notor drive ENGINEERED to the job

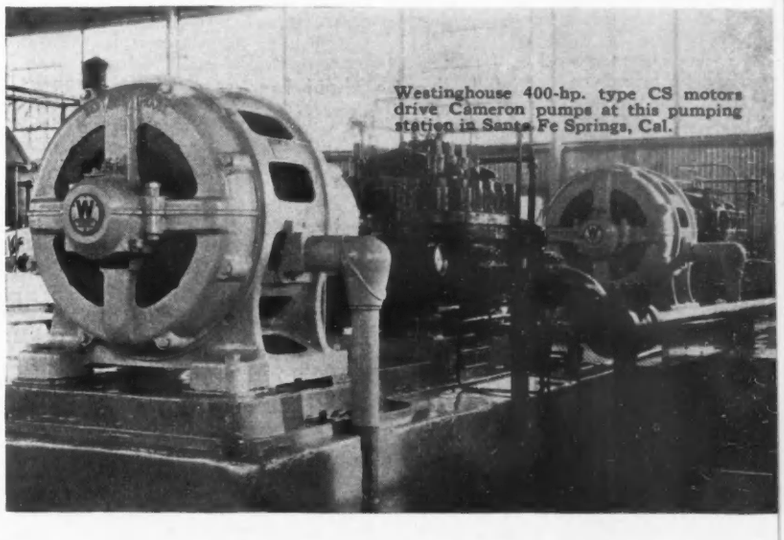
...stinghouse brings an intimate knowledge of oil industry problems ...the task of supplying your complete electrical requirements.

★ ★ ★

...r pipe line pumping, as an example, Westinghouse motor ...ve is *engineered* to the job. Service requirements are met ...the right motor in the right place. Open, splash-proof, ...pe-ventilated, fan-cooled and explosion-proof forms are ...ilable, according to the needs of the job. Convenient and ...able operation is assured by Westinghouse control, designed ...meet the exact needs of the job.

...stinghouse quality and service back up engineering knowl-...with products that give complete satisfaction. There is ...Westinghouse representative near by who will gladly discuss ...r problem without obligation. J 93277

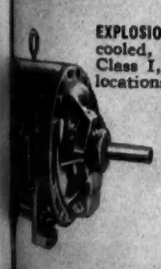
...stinghouse Electric & Mfg. Co., East Pittsburgh, Penna.



Westinghouse 400-hp. type CS motors drive Cameron pumps at this pumping station in Santa Fe Springs, Cal.

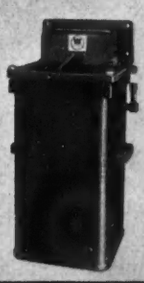
...OM DRILLING RIG TO SERVICE STATION

...RILLING • PUMPING • PIPE LINES • TANKERS • REFINERIES • SERVICE STATIONS

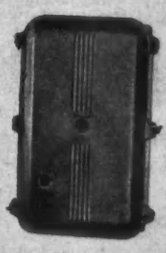


EXPLOSION PROOF MOTORS—Fan-cooled, totally enclosed, for Class I, Group D hazardous locations.

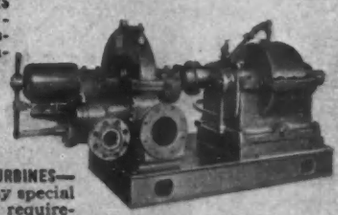
NEW OIL IMMERSED CONTROL—For motors in locations subject to explosion hazards or corrosive atmospheres.



NEW OIL IMMERSED PANELBOARDS—Provide Nofuze protection for lighting and small power circuits. Explosion-proof and corrosion-resisting.



"DEI-ON" LINESTARTERS—Dust-tight, water-tight cast iron enclosures for outdoor locations.



MECHANICAL DRIVE TURBINES—Adaptable for many special pipe line pumping requirements.

Specify Westinghouse

WESTINGHOUSE ELECTRIC

KINZBACH Makes SIDETRACKING Easy!

Check These Features

- Mill out at any desired point in the casing, in any direction, without using an anchor other than that built into the unit.
- Secure a good, clean window of sufficient length to eliminate difficulty in subsequent drilling operations.
- Mill out without fear or danger of the whipstock shifting in the hole.
- Mill out between couplings, eliminating all danger of parting the string.
- Mill out of any grade, weight, or size of casing.

Our years of experience place us in a position to offer considerable assistance on a job of this nature. We maintain a complete stock of both Whipstocks and Milling tools for your convenience.

KINZBACH TOOL CO., INC.
HOUSTON, TEXAS

California Representative:
THE LANE-WELLS CO.

in Magnolia Petroleum Company's F. Corbin 2, C E½ NE NE 6-20n-4w, completed flowing 50 barrels per hour through ½-inch choke, with tubing pressure 280 pounds and casing pressure 20 pounds. Depth is 5318 feet.

Three-fourths of a mile southeast of production Gulf Refining Company made location for Mrs. Maggie Patton 1, 330 feet south and 660 feet east C 7-20n-4w. Only one other location was made last week in Lisbon, a field with 23 active locations with 11 drilling tests.

Permian and Marine strikes revive wildcat lease plays

Shreveport.—Recent developments in this territory in lower Marine and Permian exploration have given an impetus to wildcat leasing and geophysical exploration that had lagged in the last three months.

On the southwest flank of the old shallow Homer field, Claiborne Parish, F. F. Meadows, who recently turned a block to Magnolia Petroleum Company, farther northeast, has been leasing around 33-21n-8w. Around Section 33-22n-4w, Union Producing Company has been doing detailed shooting recently.

Superior Oil Company is negotiating with Urania Lumber Company for a geophysical option on about 150,000 acres the latter owns in Grant, LaSalle and Winn parishes in the "trend" and on the southeast flank of the Sabine uplift.

In Natchitoches Parish around Section 24-13n-8w, Shell Petroleum Corporation has leased several hundred acres recently. Some of the acreage taken is across the line in Red River Parish.

J. D. Landers has completed a 6000-acre block in Union Parish around Section 30-22n-2e. Shell Petroleum Corporation is leasing north of the old Cartersville field along the Arkansas state line, but in Webster Parish, around Section 2-23n-12w, and Byron H. Schaff has recently taken some leases around Section 17-22n-9w.

Two Caddo Parish wildcats may be deepened to Permian

Shreveport.—Possibility of two tests to the Permian lime in Caddo Parish was seen last week after arrangements were completed with Union Producing Company to deepen Prairie River Syndicate's Hutchinson 1, wildcat in SW NW 15-15n-12w, 1000 feet from the present depth of 9141 feet in lower Marine, in which formation several shows of gas and distillate have been reported. Homer Hurley and associates announced that after setting 10-inch casing at 5200 feet in N. B. Stoer 1, C SE SW 10-15n-15w, and testing at the 5200-foot level, that if this is unproductive the test will be deepened to the Permian.

First well completed in new sand at Sligo field

Shreveport. — The first commercial well in a new horizon at 3118 feet in the Sligo field, Bossier Parish, was completed last week when Triangle Drilling Company's Schuler 1, C SE NW 13-17n-12w, gauged 125 barrels daily on gas lift, after using 1500 gallons of acid. This producing horizon is about 400 feet in the lower Cretaceous.

Southeast end of Sabine Uplift to get deep test

Shreveport, La.—A new 6000-foot wildcat on the southeast end of the Sabine uplift was announced last week by Arkansas Fuel Oil Company in Franklin Realty Company 1, C NE NW 20-11n-9w, Red River Parish, which is rigging up.

Louisiana - Seaboard Oil Refining Company has derrick up for Lawrence 1, SW NE 36-12n-14w, a wildcat in DeSoto Parish, and north of the lone producer in the Grogan field.

Location for the first test to be drilled in three years in the old shallow Cartersville-Sarepta field was made last week by Sam Backus and associates for Pardee Company 4, NE NE 3-22n-11w, Webster Parish. It will go to the regular producing horizon there around 2800 feet.

Chalk rock field at Zwolle extended 1½ miles south

Shreveport, La.—The old chalk rock field at Zwolle, Sabine Parish, which has been quiescent in recent months, was extended 1½ miles south last week when The Hunter Company completed Bowman-Hicks Lumber Company 1, Section 17-7n-13w, at 2492 feet flowing steadily at the rate of 15 barrels per hour through 3/16-inch choke.

Two and one-half miles northeast of the shallow Holly field, DeSoto Parish, Kingston Oil Company was swabbing with considerable oil showing in C. B. Scott 1, NE NE 32-14n-13w, at 2765 feet after logging 11 feet of sand showing oil from 2748 to bottom.

Standard Oil Company of Louisiana and associates' lower Marine test in the Sugar Creek field, Claiborne Parish, Brownfield 2, SW NW 5-19n-5w, was drilling sand last week at 6988 feet.

Oliphant testing Bodcaw in Cotton Valley outpost

Shreveport.—Cotton Valley added its twenty-second lower Marine gas-distillate producer last week when Woodley Petroleum Company's R. R. Cox B-2, N½ SW SW 23-21n-10w, was completed gauging 376 barrels of distillate in 10 hours through 9/32-inch tubing

NORTH LOUISIANA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BOSSIER PARISH (Sligo)—		
Triangle Drilling Co., Schuler A-1, 13-17n-12w	125	3118
CADDO PARISH (Rodessa)—		
Gulf Ref. Co., M. G. Campbell 2, 4-23n-16w	110	6060
R. G. Tripett et al, Davis 1, 3-23n-16w	168	6000
CLAIBORNE PARISH (Lisbon)—		
R. L. Bauman, C. S. L. Patton 2, 1-20n-5w	2328	5368
A. O. Olsen et al, H. W. Patton Est. 1, 26-21n-5w	480	5273
T. F. Patton A-4, 30-21n-4w	2005	5197
LINCOLN PARISH (Lisbon)—		
Magnolia Pet. Co., F. Corbin 2, 6-20n-4w	1200	5318
WEBSTER PARISH (Cotton Valley)—		
Woodley Pet. Co., R. R. Cox B-2, 23-21n-10w	750	8140
SABINE PARISH (Zwolle)—		
The Hunter Co., Bowman-Hicks 1, 17-7n-13w	360	2492

*Failbures; †Junked; ¶Million cu. ft. gas.

choke, with a tubing pressure of 2700 pounds and a casing pressure of 2900 pounds. Depth is 8140 feet, and Bodcaw sand was logged from 8059 to 8098 feet; elevation is 229 feet.

One mile southeast of production, A. G. Oliphant was testing Sam Banks 1, C NE NE 34-21n-10w, at 8187 feet; elevation is 196 feet and Bodcaw sand was logged from 8123 to 8170 feet.

Fourteen other tests are drilling in this field.

SOUTHEASTERN STATES

Two new Mississippi locations and one in Alabama

Jackson, Miss.—Two new locations were announced last week in Mississippi and one in southwest Alabama.

In Perry County, south Mississippi, Phillips Petroleum Company is rigging J. J. Newman Lumber Company 1, located 660 feet north and west SE SE SW 21-2n-10w, and in Wilkinson County, southwest Mississippi. A. B. Taylor and associates made location for Foster Creek Lumber Company 2, located 330 feet from SWc 31-4n-2w. This is an irregular section, normally being Section 27-4n-2w. Louisiana Crusader Oil Company and Danciger Oil & Refining Company are interested in this test.

Besides two tests that were abandoned in Mississippi last week, both being in the delta section in the northern part of the state in Bolivar and Washington counties, two other locations were abandoned at follows: H. T. Salter and associates' Carpenter 1, NW SE 5-21n-7e, Grenada County, and Phillips Petroleum Company's Dockery 1, 660 feet north and east C 27-22n-4w, Sunflower County.

Shooting Crews Busy

A seismograph unit working in Grenada County, north Mississippi, for Adams Oil & Gas Company of Houston, Texas, has completed its work there. Phillips Petroleum Company has a torsion balance unit working in George County, southeast Mississippi, California Company has a shooting unit in Walthall County. Mississippi, and Humble Oil & Refining Company has a magnetometer unit working in Lincoln County near Brookhaven.

The California Company has assembled a 6000-acre block in Township 5 north, Range 9 east in an area where Sun Oil Company and J. S. Davis of Dallas own blocks.

MISSISSIPPI

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BOLIVAR COUNTY—		
Phillips Pet. Co., Perthshire 1, 2-24-7w	*	6009
WASHINGTON COUNTY—		
Mid-Continent Dev. Co., Lee 1, 1-14n-8w	*	3455

*Failures; †Junked; ¶Million cu. ft. gas.

ARKANSAS FIELDS

Columbia County test logs base of Permian saturation

El Dorado, Ark.—Standard Oil Company of Louisiana's J. P. McKean 1, SW SW 8-16-22, Columbia County, Arkansas, last week apparently had reached base of the saturated zone in upper Permian lime, found productive of oil below 7200 feet in this test. The well had logged 49.5 feet of porous oolitic lime.

With an elevation of 257 feet, base of the saturated horizon was placed at 7246 feet with hole taken to 7259 feet. In a core from 7244 to 7249 feet, the first two feet were soft porous lime with saturation and from that point to 7249 hard and dense lime. The next 10 foot core was hard dense lime with the last three feet having a brackish taste. Operators were washing hole preparatory to circulating and recompleting the well. From present indications, this well will be a small flowing well or a pumper.

The well had first been completed at 7204 feet, making 13 barrels per hour and later deepened to 7214 feet, producing 397 barrels daily there and 370 barrels daily at 7234 feet. In the core from

T. R. Jones, Inc.

Pipe Line Contractors

Since 1918

Equipment
Experience
Organization

•

T. R. Jones, Inc.
Magnolia Building
Dallas

7214 to 7218 feet asphaltic oolitic lime was logged the first two feet and then two feet of fine grained saturated oolitic lime. In the five feet from 7218 to 7223 feet two feet and two inches of fine grained oolitic lime was recovered and in the next five feet were two feet of fine grained saturated oolitic lime. In a 10-foot core from 7223 to 7234 feet was one and a third feet of fine grained saturated oolitic lime.

Standard's next location probably will be southwest of the present location on a Bodcaw Lumber Company lease.

C. N. VALERIUS, landman for Barnsdall Oil Company, Tulsa, has been transferred to the company's Shreveport office.

ARKANSAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CROSS COUNTY—		
Manning & Martin, Park-Gieseck 1, 4-6n-5e	*	4380
LONOKE COUNTY—		
A. N. Demers, Tr., Jeff High 1, 25-1n-9w	*	512
MILLER COUNTY—		
F. W. Burford, A. J. Cross 1, 11-20-28	1560	6120
H. L. Hunt, Womack 3, 10-20-28	480	6074
W. L. McClanahan, Capps A-5, 11-20-28	1056	6075
Texas Canadian Oil Corp., K. K. Dickson 1, 11-20-28	976	6103

*Failbures; †Junked; ¶Million cu. ft. gas.

EASTERN FIELDS

Zif Township promises new pool for Illinois Basin

Pittsburgh.—With oil shooting over the top of the derrick during a drill stem test, Duncan Oil Company's Mrs. J. W. Riggs 1, Section 27-2n-8e, Zif Township, Wayne County, promised a new oil pool in the central Illinois coal basin. It is two miles southeast of production in the Clay City Township of Clay County and a mile west of Myers & Fitzpatrick's Shannon 1, Zif Township. Elevation is 456 feet by T. H. L. The tester was run to the bottom of the hole, about 3045 feet, and in 12 minutes oil rose in the drill stem more than 1500 feet. A gas pocket is believed to have formed which forced the oil out of the drill stem, spraying it over the derrick, rig, pump, lighting plant, and nearby motor cars. The oil, which was entirely free of water, is believed to have caused a short circuit when it covered the electric lighting plant and a fire started which destroyed two motors cars before it was brought under control. Some damage was also done to rig and equipment. The wildcat has been cased and cemented, and it was planned to drill out the cement plug late last week.

Among offsets immediately announced were two by Pure Oil Company: the S. S. Gill 1 to the west and the Jacob Gill 1 to the north. Rigs were building on both farms by mid-week. Duncan Oil Company will begin work immediately on the No. 2, one location east of the discovery.

In the Clay City field of Clay County, Duncan Oil Company's Duncan-Carroll 3, Section 8-2n-8e, had an initial flow of 175 barrels in 10 hours from the McClosky sand found between 2980 and 3033 feet. The company immediately established locations for Nos. 5, 6, 7, and 8. The No. 4 is drilling.

Pure Oil Company's discovery well, the E. Weiler 1, in which production tapered off in August, has been deepened from the "Wieler sand" to the McClosky at 3013 feet, where it flowed an initial 315 barrels in 24 hours.

Adams Oil & Gas Company, which opened the Patoka field of Marion County early in the year, will drill its first deep test on the Louis Schmitz farm in Clinton County. The Taylor Drilling Company, which has done most of the company's development work in Patoka field, has been awarded the drilling contract.

To Drill North and East of Basin

Two wildcat tests to the north and east of proven section of the coal basin have been announced, one in Richland County and the other in Jasper County. Wiser Oil Company is moving equipment to the John H. Trevett farm, Section 8-2n-10e, Madison Township, Richland County. Three miles southwest of Calhoun and three miles northwest of Parkersburg, the wildcat is the first Madison Township test. Denver Producing & Refining Company was to spud in on the Jacob Ochs farm, Section 33-6n-14w, Jasper County. The wildcat is the first test in the southern part of the county and is considered to have a better chance than recent Jasper County tests to the north which were failures.

In the Bradford-Allegany region, a leak in the casing at Minard Run Oil Company's well at Music Mountain, near Kennedy Park, nine miles south of Bradford, Pennsylvania, has delayed contemplated deepening operations. The test provided the region's second gusher in 15 years a week ago when it unexpectedly came in at 1402 feet. Estimated initial production was set at 50 barrels an hour and a gauge made 48 hours later revealed production of 20 barrels an hour. When the casing is repaired, the well will be deepened approximately 10 feet.

New York Completes One

New York State Natural Gas Company provided the week's sole completion in the New York-Pennsylvania deep sand gas fields. It's test on the H. J. Tubbs tract, Woodhull Township, Steuben County, New York, had an initial flow of 10,500,000 cubic feet when bottomed at 3878 feet. The well topped the Onondaga at 3825 feet and the Oriskany at 3864 feet, while initial rock pressure was 1875 pounds. It is the eleventh successful completion in the Woodhull field, which was opened less than five months ago. Fifteen wells were drilling in the township as the week closed.

Operations in the Allegany field gained slightly during the past month. As the month closed, 40 wells were drilling, compared to 37 at the end of September.

Any Oil Man

. . . in our neck of the woods will tell you (we hope!) that even if PELCO didn't handle lines you wouldn't want to drill or produce without, it would still be a darned good outfit to do business with.

PELICAN WELL TOOL & SUPPLY CO.

SHREVEPORT LOUISIANA

Lake Charles—Houma—Converse
New Iberia—Rodessa—Monroe
Cotton Valley—Greggton
Houston

EASTERN FIELDS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
WEST VIRGINIA		
BOONE COUNTY—		
Pond Fork Oil & Gas Co., Cole & Crane 20	*	....
BRAXTON COUNTY—		
Pittsburgh & West Virginia Gas Co., T. R. Stump 7645	¶.30	1685
CALHOUN COUNTY—		
Metz Farm Oil Co., Peter Metz 4	40	1897
McIntosh & Grimm, Seymour Settle 2	¶1.40	2300
CAMPBELL COUNTY—		
R. H. Adkins, J. W. Stanley 1	¶.21	2089
GILMER COUNTY—		
McCall Drilling Co., Clark Fling 1	1	2255
Massey & Jarvis, A. W. Moore 1.	¶.60	1640
F. B. Wilfong 1	¶	1620
KANAWHA COUNTY—		
Columbian Carbon Co., Nellie B. Sleath 1	¶1.29	4989
LINCOLN COUNTY—		
Blue Ridge Gas Co., W. E. Madden Heirs 1	¶	3181
Summerson & Swanson, J. A. Thompson 2	¶1.77	3182
PLEASANTS COUNTY—		
W. C. Patterson, J. W. Hines 1	1	1529
W. F. Carmichael, Inez Carmichael 1	*	961
RITCHIE COUNTY—		
F. R. Ball et al, Strickler, Drey & Scott 4	2	2025
Clifton Oil & Gas Co., Maggie V. Garner 1	¶.40	1855
Prather Oil & Gas Co., Andrew Prather 3	¶.26	1837
McDougal Farm Oil Co., J. Barnard 2	*	1875
Richards & Moats, B. W. Cowell 1	*	1845
WAYNE COUNTY—		
Kentucky-West Virginia Gas Co., P. W. Sansom	¶.22	3474
Finance & Service Co., V. L. Lusher 5	¶.14	3458
WETZEL COUNTY—		
Philadelphia Oil Co., Louisa Carney 1	1½	3065
OHIO		
ASHLAND COUNTY—		
Robinson Development Co., Howard Young 7	*	670
BELMONT COUNTY—		
Peters et al, James Skinner 2	¶1.90	....
Barnesville Development Co., L. P. Bailey	¶1.00	....
GUERNSEY COUNTY—		
Geo. Jewell, Charles Gobson 2	¶.39	1283
M. J. Purdy, Iva V. Griest 1	¶.10	1725
HOCKING COUNTY—		
Ohio Fuel Gas Co., Sunday Creek Coal Co. 154	¶.23	2660
HOLMES COUNTY—		
Bell Bros., Zella Logsdon 1	*	915
JEFFERSON COUNTY—		
N. A. Sutton Oil Co., J. G. Shane 3	1	1460
KNOX COUNTY—		
H. E. Perkins, Chas. Simpson 1	¶.45	2690
Upham Gas Co., W. B. Harding 1	*	3040
LICKING COUNTY—		
Wehrle Gas Co., Caldwell & Currie 1	50	3035
North Fork Oil Co., J. C. Williams 11	15	672
LORAIN COUNTY—		
Ohio Fuel Gas Co., Nettie Ohmes 1	*	2695
MEDINA COUNTY—		
L. B. Curtis, Ward Thomas 1	*	510
MEIGS COUNTY—		
Peoples et al, Paul Bailey 2	*	930
MUSKINGUM COUNTY—		
Hope Construction & Refining Co., Almeda Butler 4	80	3210
Gas Producing Company of Ohio, Edward Myers 1	30	4180
NOBLE COUNTY—		
J. T. Watson et al, Elmer Bond 1	¶.11	1485
PERRY COUNTY—		
Thistle Oil Co., R. Drake 28	5	1505
STARK COUNTY—		
White et al, James M. Snyder 2	*	4515
WASHINGTON COUNTY—		
Stewart et al, James Heslop 12	¶	972
KENTUCKY		
BRECKENRIDGE COUNTY—		
A. V. Smith et al, Albert Huff 1	*	360
DAVIESS COUNTY—		
Daugherty & Ellis, C. W. Howard	15	1095
Ashby & Ellis, Myrtle Howard 8	10	....
FLOYD COUNTY—		
Kentcky-West Virginia Gas Co., John M. Woods 5229	¶.63	1007
HANCOCK COUNTY—		
J. C. Ellis, Odie Richards 12	50	323
F. Damron et al, Homer Rice 2	¶.33	530
White, Vickers et al, Mrs. M. O. Brown 5	*	590
Frank Damron, Hefner Heirs 2	*	407
HENDERSON COUNTY—		
Mecca Oil Co., Mrs. Laura Robards 1	4	....
LEE COUNTY—		
Oakes & Crabtree, Andrew Combs 3	75	950
Thomas Wittmer, J. C. White 4	5	670
South Penn Oil Co., Flahaven Land Co. 96	*	....
McLEAN COUNTY—		
South Penn Oil Co., Alma Nall 1	240	1465
Clark & Snyder, E. Humphrey 5	*	1360
OHIO COUNTY—		
Henry Scholl, J. S. Babbitt 3	5	....
Snowden & McSweeney, J. J. Midkiff 23	5	....
Moss Oil Co., W. H. Lyons 3	¶.20	255
Kentucky Natural Gas Co., Smith & Cox 5	*	1370
Cox, Lang et al, Mrs. Abbie Calloway 2	*	400
Rawlings, Wilbur King	*	705
POWELL COUNTY—		
Mrs. Agatha Wireman, J. W. Townsend 20	10	....
Petroleum Exploration Co., Lillie Belle Watson 11	3	....
NEW YORK		
STEUBEN COUNTY—		
New York State Natural Gas Co., H. J. Tubbs 1	¶10.50	3878
PENNSYLVANIA		
GREENE COUNTY—		
Peoples Natural Gas Co., Thomas L. Parks 2185	¶.10	3200
Natural Gas Co. of W. Va., Braddock & Cook 4	*	3457
WASHINGTON COUNTY—		
South Penn Oil Co., Piedmont Coal Co. 2	¶1.50	2985
Millliken & Pethtel, R. R. Cowden 1	¶	830
Manufacturers Light & Heat Co., Ella Johns 1	*	3127
ILLINOIS		
CLAY COUNTY—		
Duncan Oil Co., Carroll 2	500	3003
Carroll 3	435	3033
Pure Oil Co., Oscar Poppe 12	414	2997
Chaffin 3	392	2998
B. Travis 6	388	2990
A. Travis 2	350	2988
Weiler 1 (discovery well, deepened	315	3013
Wilkin 5	300	2993
N. Mosley 2	86	3004
MARION COUNTY—		
Adams Oil & Gas Co., Boyd 4	50	1414
RICHLAND COUNTY—		
Carter Oil Co., Watkins 1	800	3010
Ohio Oil Co., E. H. Arbuthnot 3	24	2961
INDIANA		
DAVIESS COUNTY—		
Sage & Oliphant, Geo. Schwartz 1	¶	592
Midwest Development Corp., Geo. T. Cavenaugh 1	*	1022
GIBSON COUNTY—		
M. & M. Producers, Inc., Lillie B. Williams 2	5	1458
L. M. Corn 4	*	294
L. M. Corn 5	*	....
Midwest Development Corp., Wm. H. Barthold 5	¶	450
GREENE COUNTY—		
Worthington Petroleum Corp., Byron T. Greene 1	*	1695
HARRISON COUNTY—		
Indiana Utilities Corp., Louis Gunther 1	¶	732
KNOX COUNTY—		
Kentucky Natural Gas Corp., Cora M. Alsop et al 2	*	856
PERRY COUNTY—		
Midwest Development Corp., F. A. Schrolucke 7	¶	726
C. H. Roederer et al, Dean Heirs 1	*	300
PIKE COUNTY—		
Murphy Oil Co. of Pa., Essie Stewart 1-B-30	¶	1186
H. M. Medeau Trustee, Thos. Miley 1	*	1313
Indiana Southwestern Gas Corp., W. S. Deffendall 1	*	1410
SULLIVAN COUNTY—		
O. A. Thayer et al, J. H. Bates 3	2	....
WABASH COUNTY—		
Homer Williams, Samuel & Martha E. Fleming 1	¶	957
WELLS COUNTY—		
S. Allen, Albertson 1	*	....

*Failbures; †Junked; ¶Million cu. ft. gas.

Gotkool
WATER CANS
& COOLERS
Gott
WATER COOLER
GOTT WATER COOLER
Made in 3, 5, 8, 10, and 20 gallon sizes.
GOTT Water Coolers are the convenient way to keep drinking water handy to the worker, protect it from impurities. Their exclusive construction keeps water cool for long periods. Snug fitting large removable top, handy non-leaking push button faucet. GOTT Water Cans for handy field use. Your Supply Store has them, get one today! . . . .
Gott
GOTT WATER CAN
Made in 1½, 3, 5, and 10 gallon sizes.
H. P. GOTT MFG. CO.
WINFIELD, KANSAS
KEEP PURE DRINKING WATER ALWAYS HANDY

A NEW PRODUCING WELL EVERY 45 MINUTES

A reliable authority has figured that every forty-five minutes a new producing well is completed in Texas. This graphically brings to our minds the tempo of the oil industry; accentuates the time requisite to devote to drilling.

No operator need be handicapped—in time and expense—by scale and corrosion troubles in boilers and engines.

SAND BANUM

"The Entirely Different Boiler and Engine Treatment"

. . . eliminates all these troubles regardless of the operating conditions or the nature of the water used. Not only is this product SAFE, SANE and SURE but it is also the **Simplest Method Available!**

A Few Ounces—from a 16 oz. can—applied one to four times per month gives you this perfect control. This pure colloidal concentrate is contributing its share to the high-speed efficiency of the oil industry; thousands know its merit and economy. And yet, it is always sold on a **"Satisfaction or No Money" guarantee** — write today for interesting booklet "HOW and WHY!"

AMERICAN SAND-BANUM COMPANY, Inc.

9 Rockefeller Plaza New York City

Stocks carried by

WESTERN SAND-BANUM COMPANY

Houston, Texas Fresno, Calif.

and at other convenient points including leading supply houses

CALIFORNIA FIELDS

Long Beach ordinance opens big acreage for drilling.

* * *

Added Wilmington acreage generally in large tracts.

Los Angeles.—As of November 11, an ordinance goes into effect which throws open to drilling about 1400 acres of land inside the city limits of Long Beach, which is supposed to be a part of the productive area of the Wilmington field, and also opens up about 1500 acres of potential land to drilling. This ordinance has been "in the making" for a number of weeks, and is most stringent. Application for permits will be accepted November 11, but each application must be investigated before being granted by the Board of Harbor Commissioners, and it is understood that the procedure will be hurried as much as possible, although actually each application will be given special study.

Practically every acre of the land supposed to be proven has been leased. Already operators have applied for more than 200 application blanks, and it is understood that applications will flood the board's offices on the morning of November 11. One major operator, with large acreage, estimates that it will require about two weeks to get permits issued and start active work. It is permitted to unload material on the various locations prior to effective date of the ordinance, but it is not permitted to start active erection of derricks, etc., until permits have been officially approved. This line of procedure will delay active operations for close to 30 days.

Operator must file a bond for $25,000 and the filing fee is $750 per well. The bond is filed after permit is granted and before any work is done. In addition, an annual renewal permit of $150 must be paid. A complete log must be filed with the board, results of any electrical test must be filed, and it is required that hole be surveyed frequently. Such information will not be open to public inspection.

A very large part of the new area to be drilled is in larger tracts, but not large enough to get away from numerous offsets. Some smaller tracts are to be open, and a few independent operators will be able to drill. As in the older part of the field, it is indicated Union Pacific Railway Company will be the largest operator, with General Petroleum Corporation planning to drill a number of holes. Several other larger companies are also holders of fairly large leases.

Standard Oil Company is operating its pipe line to the field, but refuses to buy from any concern not curtailing at least 20 percent. Many smaller operators are producing to capacity and selling to independent refiners at slightly less than the present price.

Due to recent developments, it is indicated that the old record for the number of wells started in the state during a 30-day period will be broken during the 30 days after about November 15. A number of operators will begin to place material on the locations next week, and they will have derrick erection crews ready to start work immediately upon granting of permits. Several manufacturers of oil tools and equipment are preparing for the deluge of orders.

The big well the past week at Wilmington was General Petroleum Corporation's Ford 5A, which was completed at 4090 feet for 2565 barrels of 29 gravity clean oil. It is flowing through 375 feet of perforated landed on bottom. Seventeen new wells were staked during the week ending October 30, eight of which were credited to General Petroleum Corporation and four to Union Pacific Railway Company.

CALIFORNIA Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BELRIDGE—		
Belridge Oil Co., No. 26-53	3820	8410
KERN FRONT—		
Republic Pet. Co., Strassburger 14	280	1986
MIDWAY-SUNSET—		
C. C. M. Oil Co., No. 44	75	2305
MOUNT POSO—		
Ring Oil Co., Bohen 2	250	1690
Sunset Oil Co., Vedder 5	55	1604
D. G. Vedder, B. N. B. 3	325	1752
SANTA MARIA VALLEY—		
Pacific Western, dal Porto 1	765	4431
Union Oil, Vincent 30-2	100	4064
Vincent 30-4	1100	4375
VENTURA AVENUE—		
Shell, Taylor 90	1490	7450
RINCON—		
C. C. M. Oil Co., Hobson B-17	280	4243
SHIELLS CANYON—		
Petroleum Sec. Co., Home Ranch 6	235	4393
KERN COUNTY—		
Seeco Pet. Corp., Armstrong 1	*	1210
Birch Ranch Oil Co., Lovitt 1	*	3850
KERN RIVER—		
Alfred Fuhrman, No. 11	*	630
EL SEGUNDO—		
Pacific Western, Goodwin 1	1100	7436
NORTHWEST LONG BEACH—		
Hilldon Oil Co., Flood Control B.	175	4020
Union Oil, Oil Operators 1	315	4155
WILMINGTON—		
General Pet., Ford 5-A	2566	4090
Isco A-6	1095	3575
McDonald & Burns, Banning 2	275	3625
Union Pacific Ry., Offset 44	705	3348

*Failures; †Junked; ¶Million cu. ft. gas.

UNRETOUCHED PHOTOGRAPHS THAT SPEAK FOR THEMSELVES

The photograph above shows stands of drilling pipe used on a job in Corpus Christi. Note particularly the polished tool joints indicated by the arrows, worn smooth without Patterson-Ballagh Protectors. Note the tool joints on the pipe where protectors have been installed with wrench marks clearly discernible.

At the left is a photograph of drilling pipe used in the Rodessa field of Louisiana. This pipe and protectors have just finished their seventh well with fourteen months continuous drilling. There is no loss in diameter or change of position of the Patterson-Ballagh protectors on the drill pipe.

No metal is used in Patterson-Ballagh Protectors. None is necessary because the rubber is of special composition which retains its original strength and tenacity. This inherent resiliency of specially compounded rubber assures the protectors retaining their original grip on the drill pipe. With the rotary mud serving as a lubricant, Patterson-Ballagh Protectors serve as bearings between tool joints and casing.

PATTERSON-BALLAGH CORP.

Plant and General Offices:
1900 East 65th St., Los Angeles, Calif., U.S.A.
New York Office: 39 Courtlandt St., New York City; Oklahoma Office: Oklahoma City, 1704 N. W. 17th St.; Texas Office: Houston, 515 M & M Building; Louisiana Office: Box 23, Oil City, La.

PATTERSON-BALLAGH PROTECTORS

MICHIGAN FIELDS

Second Township test most important wildcat in state

Mt. Pleasant, Mich.—A 1000-gallon acid treatment is scheduled this week for Whitehill, Clovis and Drury's Bosley 1, NE NE SE 11-19n-1e, Gladwin County, if a plug back against bottom hole water is successful. The wildcat test, located about nine miles northeast of Buckeye field, Gladwin County, showed 1500 feet of oil at 77 feet in the Dundee limestone and made a 54 barrel flow at 90 feet in the limestone. Water was picked up at 94 feet in.

Royalty Prices Soar

Despite the bottom hole water showing, Michigan operators regard the Bosley test in Secord Township as the most promising wildcat development in the state. Interest manifests itself quickly with numerous lease deals closed this week and royalty prices moving up to as high as $400 an acre within a half mile of the test.

With an elevation of 763 feet, the test logged the Traverse limestone at 2597 feet and the Dundee limestone at 3362 feet. First pay was logged 77 feet in, with an increase at 86 and 90 feet in.

Geology on the area indicates the Secord Township test is on a new structure separate from Buckeye and Bentley Township structures.

Whitehill, Clovis & Drury have a 1400-acre block checkerboarded around their well, with Mammoth Producing & Refining, Wicklund Development Company, Sun Oil Company and C. W. Teater, Inc., holding sizeable blocks also.

Nottawa Interest Wanes

Boston Oil & Gas Company is completing the Fox 1, Section 23-15n-5w, Nottawa Township, Isabella County, as a 30-barrel pumper at 3808 feet in the Monroe limestone following a 500-gallon acid treatment. Water is cutting the oil about 15 percent. Much of the original interest in the Nottawa Township wildcat has petered out, although at least four tests will be drilled by other companies in an attempt to define structure and get production in the area.

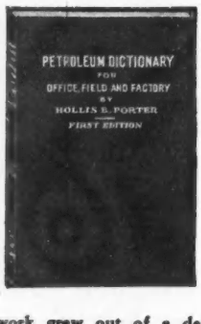
Deepened 28 feet from its original completion point of 3497 feet, Harold J. Hand's Smart 1, 29-17n-2e, Bentley Township, Gladwin County, a wildcat test 7 miles southeast of Buckeye production, is now flowing 96 barrels every other day. Prior to deepening, the test (after a 1500-gallon acid treatment) averaged 32 barrels daily over a two-weeks period on the pump. Operators are re-tubing and will acidize again.

Increased production by deepening the Bentley test has again boomed that district. Four tests are active, and from 5 to 10 more are due to start if markers on current drilling projects bear out geological projections of the structure.

PETROLEUM DICTIONARY

By HOLLIS P. PORTER

Member of American Society of Mechanical Engineers, American Petroleum Institute



This work grew out of a demand for some source of definition for the terms used by the petroleum industry. It contains over 3,000 definitions of words used constantly by all phases of the petroleum industry. It was published in 1936 and has found its way into engineering departments, legal departments and land departments of producing concerns, as well as to the desks of executives of the petroleum industry.

Manufacturers also find it valuable for reference. Advertising agencies find it a valuable addition to the library.

253 Pages, 6 x 9, cloth bound, Price Postpaid, $3.00.

Send order to

THE GULF PUBLISHING COMPANY

P. O. Box 2811, Houston, Texas

MICHIGAN Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ALLEGAN COUNTY—		
Allegan Crude Oil Co.'s Heasley 4, nw ne ne 21-4n-13w	800	1608
Muskegon Oil Corp.'s Hessley 1, ne sw ne 21-4n-13w	200	1572
Sebright 1, ne se ne 21-4n-13w..	500	1572
Mich. Devonian's Huizinga 1, nw sw nw 22-4n-13w	140	1581
ARENAC COUNTY—		
Joe Zucker's Reed 1, sw se nw 10-19n-5e	*	3100
CHEBOYGAN COUNTY—		
Bert Francis, Tr.'s Campbell 1, nw se ne 7-34n-1w	*	650
GLADWIN COUNTY—		
McClanahan Oil Co.'s Havens 1, se ne ne 9-17n-1e	60	3608
Sun Oil Co.'s Strohkirch 3, ne ne ne 9-18n-1w	128	3582
Strohkirch 2, se ne nw 10-18n-1w	800	3658
Strohkirch 6, nw nw nw 10-18n-1w	81	3672
Cryden & Rowmor's Schaffer 8, se se sw 12-18n-1w	800	3633
E. S. Beaver's Thompson B-1, nw sw nw 13-18n-1w	490	3633
Smith Pet. Co.'s Brenner 3, se se nw 14-18n-1w	180	3645
Jacob Beck's Buhler 1, sw sw sw 24-18n-1w	100	3598
ISABELLA COUNTY—		
Pure Oil, Willie 8, nw nw ne 4-14n-6w	200	3624
Willie 9, ne nw ne 4-14n-6w	130	3619
Boston Oil Co.'s Fox 1, ne ne ne 23-15n-5w	40	3808
MONTCALM COUNTY—		
E. C. Dailey's Lewis 1, c nw se 11-12n-7w	¶15	1259
MUSKEGON COUNTY—		
W. Mich. Consumer's Tabey 1, c nw 19-10n-14w	*	1200
OGEMAW COUNTY—		
Dunigan & Fothergill's Elsner 1, se se nw 20-22n-2e	100	2743
Stamy & Wade's Fisk 2, se ne ne 28-22n-2e	100	2730
Weber Oil Co.'s Hyslop 1, se ne nw 28-22n-2e	50	2700

*Failures; †Junked; ¶Million cu. ft. gas.

ROCKY MOUNTAIN FIELDS

Deep Minnelusa objective of most Wyoming drilling

Casper, Wyo.—Deep Minnelusa formation production in Lance Creek is the most important objective of current drilling in Wyoming. Argo Oil Corporation completed Ford 4 in that formation during the week for 175 barrels after plugging back to 5392 feet. Several other wells in the field are headed for the Minnelusa, with a number due for completion soon. Some are deepening jobs, others new locations.

J. M. Huber Corporation's Midwest 2, NE SE SW 27-36n-65w, an attempt to extend Lance Creek north, is preparing to test formation reported to be Minnelusa.

Continental Oil Company's Leach 1, SW NE NE 29-36n-64w, a wildcat several miles from production and on East Lance Creek high, drilling near 5755 feet, is believed nearly objective Minnelusa sand.

Central Wyoming interest was focused on Salt Creek field, Natrona County, where Stanolind Oil & Gas Company is preparing to complete the second well of a campaign started to deeper production from Tensleep sand. Saturation was logged at 4037 feet in Stanolind's Wyoming Associated Oil Company-Tensleep 11, CNE NW 35-40n-79w. Another test of the company is nearing the zone.

Italo Petroleum Corporation is drilling below 2250 feet in Phebus-Government 1 in an attempt to bring about a northwest extension to Hamilton dome field. This wildcat, located in NW NW SW 11-44n-98w, is 18 miles west of Thermopolis, Wyoming.

Greater market outlet for Osage field, Weston County, resulting from recent increase in capacity of Consumers Oil Refinery Company's plant at Newcastle, Wyoming, is responsible for six new locations in the field. Some of the projects have shallow Muddy sand production as objectives, others the Sundance or Minnelusa.

MOUNTAIN STATES Completions

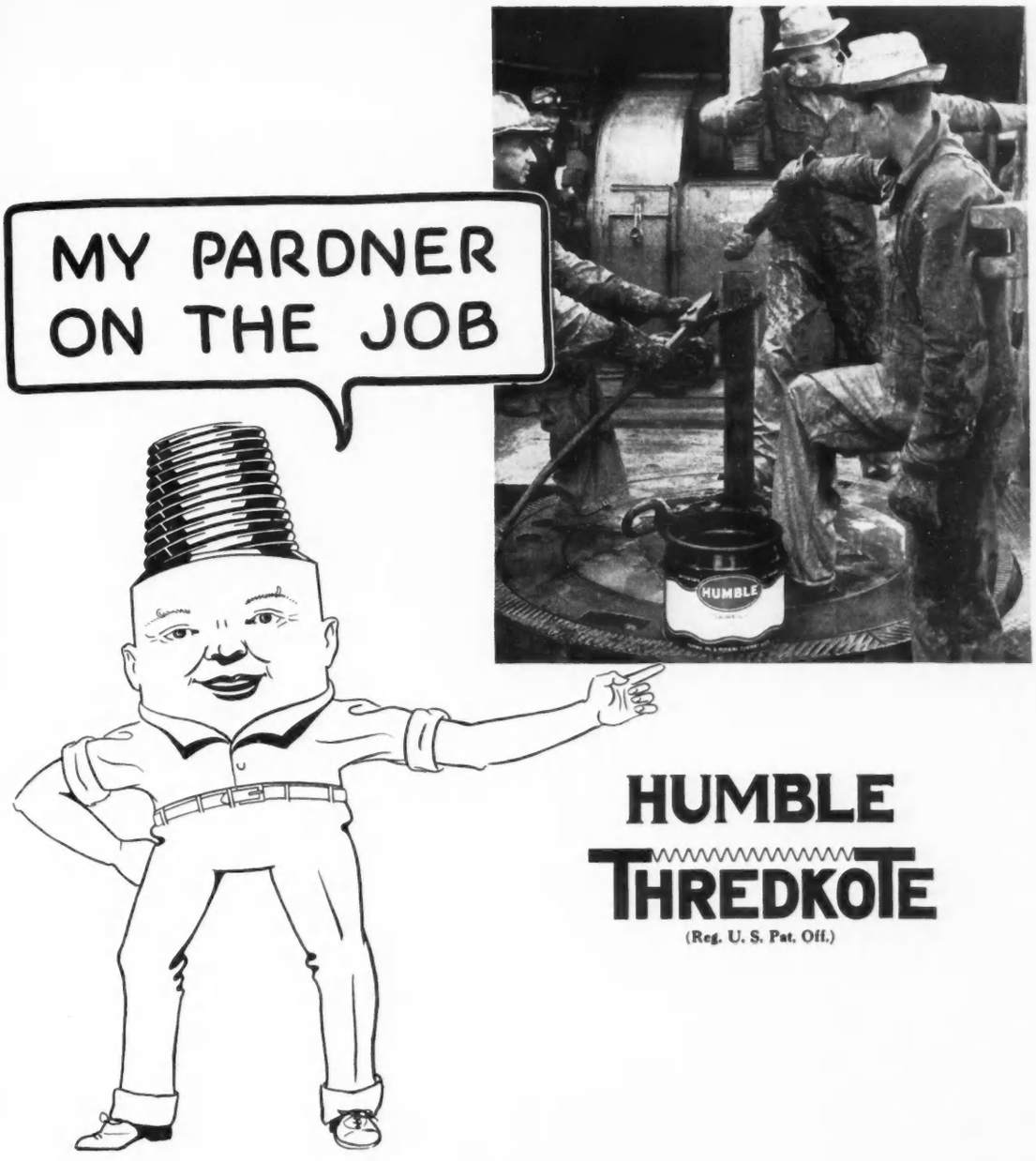
MONTANA

Company, Well and Location	Init. Prod. Bbls.	Depth.
GLACIER COUNTY (Cut Bank field)—		
R. C. Tarrant's, Long-Miller 6, csw nw 24-3n-6w	*	2900
Lawlor-Hoerr, Downen 2, swc se sw 9-33n-5w	100	2917
Glacier Production Co., Forbes Unit 1, cse nw	¶5¼	2670

WYOMING

NIOBRARA COUNTY (Lance Creek field)—		
Continental Oil Co., Tom Bell 10, csw nw 34-36n-65w, 163	¶9	5301
Ohio Oil Co., Taylor 2, OPC-32, nwc nw sw 3-35n-65w	*	6214½
PARK COUNTY (Elk Basin field)—		
Ohio Oil Co., Woods 15, OPC-3, nw se 39-58n-99w	¶11	2834

*Failures; †Junked; ¶Million cu. ft. gas.



HUMBLE
THREDKOTE
(Reg. U. S. Pat. Off.)

A tool joint's job was never an easy one. But today tool joints have a partner on the job that shares much of the hardship and makes a tool joint's life an easier and a longer one. By its three-point service: **lubricating, sealing,** and **rust preventing,** Humble Thredkote helps your tool joint do a better job for a longer time. Humble Thredkote deserves a place on your derrick floor. Order a 25-pound can today from your local Humble Bulk Agent or write direct to

HUMBLE OIL & REFINING COMPANY

HOUSTON, TEXAS

IMPORTANT WILDCAT TESTS

ALABAMA

CHOCTAW COUNTY—Joe Modisett et al's McCorvey 1, se sw sw 20-9n-2w, elev 120 ft, top Selma chalk 1865 ft, top Eutaw 2913 ft, top Tuscaloosa 3525 ft, top upper Cretaceous marine formation 4100 ft, dr 6760 ft red beds.

GREENE COUNTY—Greene County Dev. Co.'s R. C. Lett 2, se nw 5-21n-2e, sd 115 ft.

HOUSTON COUNTY — Rice O&G Co.'s Oakley Est. 2, se nw sw 9-3n-29e, sd 4975 ft.

MOBILE COUNTY—Grand Bayou O&G Co.'s J. A. Stafford 1, sw sw 24-7s-3w, lcn abn, leases expired. J. C. Prine's King 2, ne ne 4-1n-4w, elev 135 ft spd 10-in csg 300 ft, sd 1100 ft repr boiler (1100 ft s of No. 1).

ARKANSAS

CALHOUN COUNTY—Hayner et al's Brandon 1, sw nw sw 34-11-13, spd dr 2165 ft.

CLEVELAND COUNTY—J. R. Lockhart's Hernsberger 1, se ne 16-11-13, ru & sd.

COLUMBIA COUNTY—Kerrlyn Oil Co.'s Barnett 1, sw ne 14-17-20, dr 4165 ft shale & lime. Tide Water Associated & Seaboard's C. N. Crumpler 1, ne c sw 24-17-19, elev 282 ft, top lower Travis Peak 5420 ft, dr 6445 ft hd shale, streaks lime. E. O. Olds' Mary Dennis 1, nw se sw 4-17-21, dr 3556 ft shale and anhydrite.

CRITTENDEN COUNTY—Stanley Oil Corp.'s D'Anna 1, 18-8-9, elev 225 ft, dr 2056 ft (no recent report).

CROSS COUNTY—Manning & Martin's Park-Gieseck 1, nw c ne ne 4-6n-5e, dry abnd 4380 ft (corrected depth).

DREW COUNTY—Sloan Wells et al's Hardy 1, se c nw 3-14-7, rur.

HEMPSTEAD COUNTY—Easton, May & Murdock's R. M. LaGrone 1, ne ne 5-12-26, sdtr td 2944 ft.

LINCOLN COUNTY—Fitzwater Inc.'s Owen 1, nw se ne 26-9-8, sd 600 ft.

LONOKE COUNTY—Frank Silver's Chambers Est. 2, sw ne sw 17-2-7, wo 1500 ft.

MILLER COUNTY—Freeman W. Burford's August 1, 8-20-27, testing pb depth 6165 ft, old td 6230 ft. Odell Hinson's Montana Realty Co. 1, nw nw 3-17-28, arr perf, td 5278 ft. Hearrell & Burnet's Willie Wallace 1, se nw se 7-20-27, mim.

OUACHITA COUNTY — Copenhaver Oil Corp.'s J. E. Evans 1, ne sw 20-11-19, sd 1730 ft. O. F. Whittaker's C. C. Guttry 1, se sw se sw 21-15-19, bro sand 2164-80 ft, cemtd 7-in csg 2136 ft, bailed dry, sd 2180 ft.

SEVIER COUNTY—C. & M. Oil Co.'s Arnold 1, sw nw ne 23-9-30, sd 1228 ft.

UNION COUNTY—Alice Sidney Oil Co.'s Morgan 2, 18-18-17, dr 7092 ft shale. E. M. Jones' Marine Oil Co. 2, 17-18-17, dr 5705 ft; Marine Oil Co. 3, 17-18-17, dr 1420 ft; Marine Oil Co. 4, 17-18-17, dr 3830 ft. Lion O. R. Co.'s Morgan B-4, nw nw se 18-18-17, rur; Morgan C-1, se se 18-18-17, rur; M. Justiss 1, nw ne 19-18-17, owdd td 6012 ft; Marine 1, 17-18-17, dr 3210 ft; Morgan B-3, 18-18-17, rur. Marine Oil Co.'s M. Justiss 2, 18-18-17, dr 2375 ft. Phillips Pet. Co.'s Ed Gan 1, 18-18-17, dr 7005 ft; Jennings 1, 18-18-17, woc 1650 ft; Marais Justiss 2, se nw 18-18-17, rur; T. P. Marks 2, ne sw 18-18-17, rur.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

*—*dry hole abandoned well.*	owdd—*old well drilling deeper*
‡—*salt water (completions).*	owpb—*old well plugging back.*
†—*junked and abandoned.*	pb—*plugged back or plugging back.*
¶—*million feet of gas.*	r—*reaming.*
abd—*abandoned.*	rog—*rig on the ground.*
bbls—*barrels.*	rur—*rigging up rotary tools.*
br—*building rig.*	rust—*rigging up standard tools.*
b.s.—*basic sediment.*	sd—*shut down.*
csg—*casing.*	sdtr—*sidetracking.*
co—*cleaning out.*	sg—*show gas.*
dd—*drilling deeper.*	si—*shut in.*
dk—*derrick.*	so—*show oil.*
dr—*drilling.*	so&g—*show oil and gas.*
fsg—*fishing.*	spd—*spudding.*
ft—*feet.*	sr—*straight reaming*
hfw—*hole full of water.*	sw—*salt water.*
in—*inches.*	td—*total depth.*
lcn—*location.*	ur—*underreaming.*
m—*milling.*	wih—*water in the hole.*
mim—*moving in materials.*	wo—*workover.*
mit—*moving in tools.*	wocs—*waiting on cement to set.*
mot—*milling on tools.*	wosr—*waiting on standard rig.*
n, s, e, w—*north, south, east, west.*	
oih—*oil in hole.*	

CALIFORNIA

FRESNO COUNTY

DOS PALOS—Bergman Oil Co.'s Ora Loma 1, 12-12-11, td 6006 ft, to resume dr.

CLOVIS—Central Valley Oil Co.'s No. 1, 1-12-20, dr shale 100 ft.

JACALITOS CREEK—Dauphin Dev. Co.'s Boone 1, 20-21-14, dr oil sand 1035 ft. 12-14-11, lcn.

PANOCHE—J. A. Gauthier's Hubbard 1.

JACALITOS HILLS—Jacalitos Pet. Co.'s Associated 1, 14-21-15, dr shale 1200 ft.

HURON—Pure Oil Co.'s S. P. 1, 31-18-17, dr shale 7520 ft.

CIERVO—Superior Oil Co.'s No. 1, 20-16-13, grading.

TRANQUILITY—Union Oil Co.'s Nicholson 1, 17-15-15, lcn.

KERN COUNTY

DEVIL'S DEN—Amerada Pet. Corp.'s Beer 5, 22-26-19, dr shale 2788 ft. Den Pet. Co.'s Bates 1, 20-25-19, sd 4716 ft.

MIDWAY SUNSET—American Empire Oil Co.'s No. 1, 20-31-24, rig.

LERDO AREA—Arkelo Pet. Co.'s No. 41, 23-28-26, td 10,056 ft. redr to 7780 ft, sd.

McKITTRICK—Birch Ranch Oil Co.'s Lovitt 1, 10-30-21, abn 3850 ft. Par-Mer Oil Co.'s Par Mer 1, 6-31-22, dr shale 1096 ft. Rocima Oil Co.'s No. 1, 20-30-22, foundation.

WASCO—Continental Oil Co.'s K.C.L. A-2, 8-27-24, td 11,584 ft, stuck dr pipe cutting and pulling. Seaboard Oil-Tide Water Associated's K.C.L. C-1, sd 10,213 ft.

ROSEDALE—Continental Oil Co.'s K.C.L. B-1, 12-29-26, td 10,205 ft, fsh.

ROUND MOUNTAIN—Crestmont Oil Co.'s Taley 1, 8-28-29, rur. Freemont Oil Co.'s Olcese 2, 31-28-29, rur. Rudolph Pageman's No. 1, 10-28-29, rig. J. J. Tavis' Olcese-Tavis 1, 4-29-29, sd 3260 ft.

ARVINE—General Pet. Corp.'s Houchin 1, 27-31-29, td 7414 ft, ran formation tester, good for 104 bbls 30 gravity oil in 16 hours, coring ahead.

BELRIDGE—General Pet. Corp.'s St. Helens 1, 12-28-20, dr shale 2450 ft.

STRAND—Ohio Oil Co.'s K.C.L. E-3, 14-30-25, dr shale 8025 ft.

GRAPEVINE—Ohio Oil Co.'s T.R.C. D-2, 23-11-19, lcn. Tide Water Associated's S.P. 1, 33-12-19, lcn. Universal Cons. Oil Co.'s No. 1, 33-11-19, rur.

KERN FRONT—Pacific Oil & Gas Dev. Co.'s Davidson 2, 36-27-27, rig.

MOUNTAIN VIEW—Section Six Oil Co.'s Johnston 1, 6-31-29, td 6002 ft, co.

McFARLAND—Seeco Pet. Corp.'s Armstrong 1, 9-26-26, td 1210, ft abn.

KERN RIVER—Sleeper Ridge Oil Corp.'s No. 1, 15-29-28, dr gray sand 1410 ft.

TEN SECTION—Standard's K.C.L. 15-27-30-26, wocs 13⅜ in at 1100 ft, bottom.

SEMITROPIC—Standard's Randolph Com. 2, 14-27-23, dr shale 5680 ft.

McGUNDEN—Standard's Routzong 1, 2-30-28, dr shale 4038 ft.

McFARLAND—Stone & Freid's No. 1, 34-25-25, rig.

GREELEY—Superior Oil Co.'s K.C.L. 9, 3-30-26, td 7870 ft, flowed on compressor to sump, salt water, to further test.

SOUTH MARICOPA—Texas Co.'s Pioneer 1, 33-11-23, dr shale 4350 ft.

RIO BRAVO—Union Oil Co.'s Kernco 1-34, 34-28-25, td 11,302 ft, cemented blank liner 11,220 ft, testing water shutoff.

MOUNT POSO—Vedder Pet. Corp.'s No. 25-1, 25-26-27, dr shale 1780 ft.

MISCELLANEOUS

HUMBOLDT COUNTY—Texas Co.'s Eureka 2, 22-3-1, td 7708 ft, plug 5737 ft, shutin pressure 225 lbs.

KINGS COUNTY—Ray Bisconer's No. 2, 11-24-20, sd 1650 ft. Dudley Ridge Dev. Co.'s No. 2, 24-23-20, sd 3850 ft. Pyramid Prod. Co.'s Retherford 1, 27-24-18, dr shale 380 ft, dips 20 degrees. Tri-Counties Oil Co.'s Olson 1, 10-23-23, sd 5810 ft, to drop from report.

MERCED COUNTY—Amerada Pet. Corp.'s Carano 1, 19-10-11, dr shale 3968 ft.

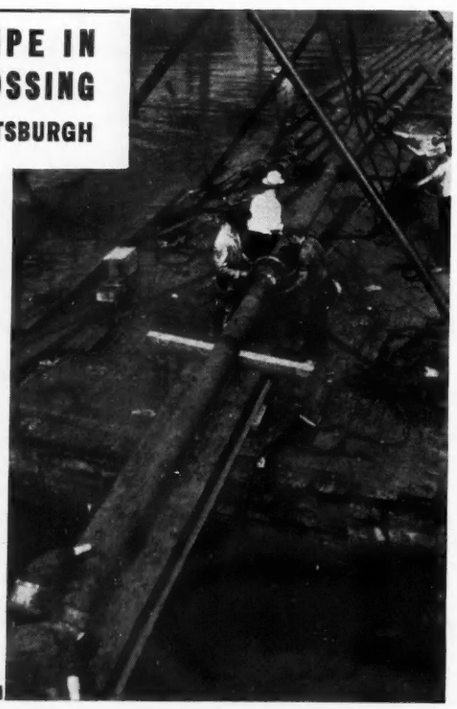
SAN JOAQUIN COUNTY—Standard's Weil-Zuckerman 2, 25-2-4, td 5265 ft, wocs 9⅝ in at 5206 ft.

SAN MATEO COUNTY—Wilshire Oil Co.'s Cowell 1, 20-6-5, dr shale 3000 ft.

SOLANO COUNTY—Amerada Pet. Corp.'s Deterding 1, 36-4-2, dr sandy shale 3005 ft.

MOLOX BALL-JOINT PIPE IN NATURAL GAS LINE CROSSING ALLEGHENY RIVER, PITTSBURGH

Using a simple frame trolley lashed to the end of a barge, as shown in accompanying photo, this line of 8" Molox Ball-Joint Centrifugal Cast Iron Pipe was recently laid across the Allegheny River, near Pittsburgh, for conveying natural gas. It tested bottle-tight at 100 lbs. air, and while present normal operating pressure is 35 lbs., the gas company stated they will not hesitate to operate the line at 175 lbs. or higher, should the occasion demand. Write for detailed literature on this and other modern Acipco cast iron pipe for gas and oil transmission and distribution.



AMERICAN
CAST IRON PIPE COMPANY
BIRMINGHAM, ALA.
Dallas, Houston, El Paso, Pittsburgh, Kansas City, Chicago, Minneapolis, New York City, Cleveland, Los Angeles, San Francisco

S & S-J.I.D. 1, 24-4-2, td 4347 ft, gas well, shut in. Tracy Dr. Co.'s Hanson 1, 25-4-2, td 4415 ft, flowed 41,250,000 cu ft gas, shut in.

STANISLAUS COUNTY—Texas Co.'s Bacon 1, 30-6-8, dr shale 420 ft, spud Oct. 24.

SUTTER COUNTY—Buttes Oilfields' Marysville Buttes 3, td 5962 ft, fsh dr pipe.

TULARE COUNTY—Magnet Oil Co.'s A. O. G. 3, 29-24-24, sd 7555 ft, Standard's Morris 1, 36-24-23, dr shale 9595 ft. Trico-Oil & Gas Co.'s Bryson 1, 28-24-23, td 2466 ft, wocs 6⅝ in at 2433 ft; Valley 2, 35-21-25, rig. Tulare Dome Oil Co.'s Tulare Dome 1, 17-21-23, td 3120 ft, plug 2850 ft, sd.

YOLO COUNTY—Standard's Peter Cook 1, 32-12-1, dr shale 4967 ft; E. E. Hooper 1, 32-9-1, td 5181 ft, redr to 3670 ft, wocs 6⅝ in at 3670 ft.

MONTEREY COUNTY—Amil A. Anderson's Hillman 1, 15-24-14, sd 1977 ft. Elba Oil Co.'s Elba 1, 6-12-1, td 4021 ft; Elba 2, rig.

SAN LUIS OBISPO COUNTY—Hancock Oil Co.'s Dicks 1, 30-12-33, sd 3359 ft, to drop from report. Dorothy Leingang's No. 1, 32-10-26, sd 410 ft, to drop from report. A. O. Lewis' Pecho 1, 34-30-10, sd 2750 ft. Little Cuyama Oil Co.'s No. 1, 3-10-26, dr shale 1360 ft. Temblor Oil Co.'s No. 1, 22-31-21, sd 3050 ft. Vanguard Oil Co.'s Clark 1, 26-27-14, sd 50 ft, to drop from report.

SANTA BARBARA COUNTY—E. E. Arnold's Arnold-Apache 2, 8-8-33, td 6374 ft, pumping 40 bbls, cut 60 percent. Carpinteria Oil Co.'s No. 1, 34-4-2, rig. Crude Oil Dr. Co.'s Crude 1, 19-9-34, sd 515 ft. O. C. Field's Santa Rita 1, 11-7-33, td 3358 ft, wet, sd. C. B. Gauther's No. 17-1A, 22-4-26, lcn. Gaviota Oil Co.'s Hollister 1, 35-5-33, td 3207 ft, flowing 9,000,000 cu ft gas, 75 bbls water. Mid-Western Oil Co.'s No. L-1, 28-4-27, sd 2054 ft, to drop from report. Nine Springs Oil Co.'s Brinkinhoff 1, 9-7-30, sd 3300 ft. Standard's Los Flores Land 1, 27-9-33, rur. Tide Water Associated's Leonis 1, 3-6-33, td 4949 ft, dr pipe stuck, circulating oil. United Western Oil Co.'s No. 1, 16-7-30, sd 1032 ft. Valley Oil Co.'s Chief 1, 20-9-34, sd 2315 ft. Vista Del Mar Oil Co.'s Williams 1, 16-4-26, sd 4120 ft.

VENTURA COUNTY—Oxnard Oil Co.'s Vanomi 1, 10-1-22, td 6302 ft, plug 6200 ft, bailed 6 days, recovered muddy water and some heavy oil, sd. Seven Seas Oil Co.'s Johnson 1, 15-1-22, sd 1038 ft. Southern California Dr. Co.'s W.P.D.-2 26-2-21, rur. Vaca Oil Explor. Co.'s Livingston 1, 6-1-21, td 4270 ft, pumping 20 bbls, 34.9 gravity oil. Richfield Oil Corp.'s McFarland 1, 13-2-21, dr shale 4668 ft.

SOUTHERN CALIFORNIA

WILMINGTON AREA—Alford Dev. Co.'s Class Yards 3, 22-4-13, dr sand and shale 1250 ft.

NEWHALL-BARNSDALL'S Rancho S. F. 2, 26-4-17, td 5090 ft, redr at 3328 ft. Risdon & Henderson's No. 1, 23-3-16, lcn. West Coast Dev. Corp.'s Newhall Land 1, 27-4-16, lcn.

MONTEBELLO AREA — British American Oil Prod. Co.'s Pico 1, 1212-2, dr hard shale 3009 ft.

NORTH LONG BEACH—Geo. L. Clayton's Clayton 1, 32-3-12 td 5967 ft, co.

FOX HILLS AREA—Country Club Oil Co.'s No. 1, 19-2-14, sd 4986 ft.

PICO CANYON—Downey Oil Corp.'s No. 1, 36-4-17, dr hard sand 2390 ft.

NORTHWEST MONTEBELLO—Frank Fuller & Associates' Garvey 1, 27-1-12, lcn.

PALOS VERDES—Hunter-Devlin & Associates' No. 1, 17-4-14, td 5502 ft, top of conglomerate 5492 ft, barren, to test upper zones.

WALNUT—Julian & Criswell's Langstaff 1, 5-2-9, sd 2855 ft.

PALOS VERDES HILLS—McClaren Bros.' No. 1, 27-4-14, td 3970 ft, redr to 1870 ft, sd; No. 2, rigged up and idle.

CASTIAC — Royal Lands Corp.'s Ramona Hills 1, 8-4-17, spud Oct. 20, dr cable tools.

GARDENA—Texas Co.'s Gardena Com. 5-1, 30-3-13, lcn.

PALMDALE—Wright Oil Tool Co.'s Wright 1, 1-5-12, td 1420 ft, sd, no showings.

SALTON SEA—Natural Dry Ice Corp.'s No. 1, lcn.

ORANGE COUNTY—Shell Oil Co.'s Herbeson 1, 9-4-10, dr gray sand and oil sand 7172 ft.

FLORIDA

LAKE COUNTY—Oil Dev. Co. of Fla.'s Gulf Expl. Co. 2, se se 17-24s-25e, elev 120 ft, arr re-test at 2600 ft, pb depth, old td 6126 ft.

LEVY COUNTY—Fla. Oil Discovery Co.'s Sholtz 2, sw sw ne 9-15s-13e, sg at 1135 ft, sr td 1190 ft.

NASSAU COUNTY—St. Mary's River Oil Corp.'s Hilliard Turpentine Co. 1, nw nw se 19-4n-24e, dr 3690 ft shale and li shells.

SUWANEE COUNTY—Wm. G. Blanchard's Lucy Cotton 1, se ne 35-3s-11e, elev 70 ft, pulling 16-in csg set at 45 ft to re-set at 190 ft to eliminate caving hole.

KANSAS

BARBER COUNTY—Olson & Skelly Oil Co.'s Elsea 1, sw se nw 27-32s-14w, dr 5101 ft, 3800 ft wih. Helmerich & Payne et al's Blunk Estate 1, cse 18-34s-13w, td 5405 ft, D&A. Palmer Oil Corp. et al's Warwick 1, cnw 29-31s-10w, rur. Kansan Oil Corp.'s Mease 1, ne se se 27-30s-11w, rot rig. Pryor & Lockhart's Pickens 1, cwl e½ sw 34-30s-14w, rig.

BARTON COUNTY—C. L. Price et al's Hammeke 1, ne ne sw 12-18s-12w, 1800 ft oih. Brouk & Nat'l Ref. Co.'s Gory 1, nw nw sw 10-17s-13w, td 3352 ft, 2800 ft oih, 20 hrs. Shell Pet. Corp.'s Peterman 1, se ne se 13-16s-14w, P. 415 bbls oil, 20 hrs. Arch Merriam et al's Norris 1, ne ne nw 33-17s-11w, dr 850 ft. Martin & Foraker et al's Dick 1, ne sw sw 31-19s-11w, mim. Tom Palmer et al's Polzin 1, nw nw se 4-16s-12w, 1700 ft oih, 12 hrs. Shell Pet. Corp.'s Ehrlich 1, sw sw sw 1-16s-14w, dr 2315 ft. Stanolind O&G Co.'s Hagen "A" 1, se se se 21-20s-11w, dr 1154 ft. Elmer Ash et al's Frees 1, nw nw nw 34-16s-11w, mi tools.

CHASE COUNTY—Cal-Ill-Kans Oil Co.'s Evans 1, sw sw nw 11-22s-9e, dr 1450 ft.

CHAUTAUQUA COUNTY—C. L. Price et al's Garrett 1, nw sw nw 26-32s-11e, co 1545 ft. Harrison et al's Brown 1, ne se ne 19-34s-10e, sd 820 ft. W. G. Buffington's Fisher 1, cwl sw nw 10-34s-9e, sd 1677 ft. I. W. Siegel's Temple 1, sw sw sw 31-32s-12e, ru. Sooby et al's Davis 1, sw se nw 29-33s-10e, ru mach.

CLARK COUNTY—Olson Oil et al's Watkins 1, sw sw nw 23-32s-21w, dr 2900 ft. Olson Oil Co.'s Lehman 1, se se sw 20-32s-21w, rur.

COWLEY COUNTY—Pryor & Lockhart's Brown 1, ne se se 34-33s-3e, co 3864 ft. G. M. Smith & C. L. Price' Henderson 1, sw sw sw 25-32s-6e, set 8-in csg 1760 ft. Earl Wakefield's Whitson 1, sw ne se 8-32s-4e, rig. Arthur Brewer Co.'s Shepherd 1, ne ne sw 20-32s-4e, dr 1040 ft. Murta-Wilson et al's Stuber 1, se ne ne 27-30s-5e, cel.

EDWARDS COUNTY—Douglas & Gears' Meade 1, se se nw 35-25s-16w, sdo.

ELLIS COUNTY—Lario O&G Co.'s Ball 1, nw nw ne 8-12s-18w, set 5-in csg 3765 ft. P. G. Reynolds et al's Karlin 1, nw nw nw 13-12s-18w, set 8-in csg 2922½ ft, bailing wtr. Skiles et al's Jensen 1, sw se ne 26-12s-18w, sd 2910 ft. Colonial Oil Co. & Bernheimer's Allbert 1, sw sw ne 13-12s-18w, dr 1740 ft. Brunson Drilling & Glimac Oil Co.'s Weisner

INFERNO
Gas Burners

LOW PRESSURE BLUE FLAME

The most economical burner made for firing an oil field boiler on low gas pressures. Endorsed by the most exacting operators in the oil business. Produces short blue flame intensely hot. Made in standardized sections to fit any fire box. Welded manifold fittings are offered for any specified number of sections. Sold by all supply stores. Ask for Bulletin No. 5.

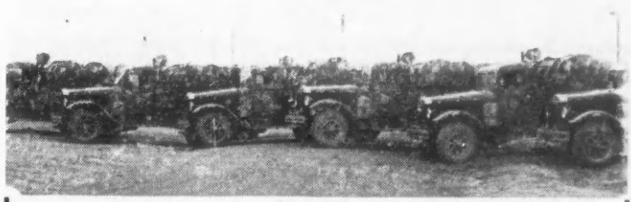
THE INFERNO CO.

"Makers of Better Steam Equipment"

P. O. Box 1138 Shreveport, La.

Have You Taken the Peace Pledge?
Write for Information

FRANKS WINCHES



Part of a Battery of ten Franks Winches used by a major company in the Oklahoma City field which acknowledges them to be the fastest, most efficient, and most economical in the field.

FASTEST...MOST EFFICIENT MOST ECONOMICAL UNITS IN THE OKLA. CITY FIELD

Franks final friction drive well-servicing units are the fastest for location to location moving. Fastest anchorage. Fastest rig-up. Save shut-down time. Exclusive anchorage facility saves thousands of dollars. Built in sizes to handle wells from the shallowest to the deepest. Mount upon and take drive from all makes of trucks. Write for information.

FRANKS MFG. CORP.

WELL SERVICING AND DRILLING UNITS

P. O. Box 137, Whittier Station, Tulsa, Oklahoma
Export Office: 149 Broadway, New York

1, se sw se 31-13s-17w, P. 30 bbls oil, 24 hrs, 5 percent wtr. Aylward Prod. Co. et al's Berens 1, se se se 10-14s-16w, dr 3480 ft. Glimac Oil Co. et al's Kansas City Life Ins. Co. 1, se sw nw 5-11s-18w, mim.

ELLSWORTH COUNTY — Colonial Oil Co.'s Hogy 1, nw nw sw 16-16s-10w, ru. Hinkle et al's Alden 1, se se sw 17-17s-10w, td 3124 ft, run 8-in csg. Hinkle et al's Andrea 1, ne ne se 17-17s-10w, ru.

FORD COUNTY—Olson Oil Co. et al's Fowler 1, csw¼ 26-27s-22w, dr 3795 ft.

GRANT COUNTY—R. K. Wilson's Helmly 1-22, cse¼ 22-28s-37w, set 7-in csg 2338 ft, rust.

GRAY COUNTY—P. G. Reynolds' Watkins 1, csw 32-28s-28w, rig.

GREENWOOD COUNTY—Ward McGinnis et al's Henley 1, sw sw sw 25-25s-9e, pb, set 6-in csg, woc. Eagle Oil Co.'s Stine 1, ne ne se 13-28s-10e, ur 8-in csg 730 ft. Van Devanter et al's Dove 1, ne se sw 12-28s-11e, td 1300 ft, D&A. Whittaker & Johnson's Cannon 1, cel se nw 8-26s-13e, dr 750 ft. John Nichols et al's Central Life Ins. Co. 1, sw sw se 35-25s-12e, mach.

HARVEY COUNTY — Allison & Fitzwilliams et al's Hawks 1, se sw ne 16-24s-1w, co 500 ft.

JACKSON COUNTY—Lemmick Oil Co.'s Marble Savings Bank 1, cne ne 26-9s-14e, sd 510 ft.

JEWELL COUNTY—Hollingsworth Bros.' Wolfe 1, nw sw se 14-4s-8w, ru.

KINGMAN COUNTY — Carter Oil Co.'s Davis 1, ce½ ne ne 24-28s-8w, td 4571 ft, D&A.

LOGAN COUNTY—Morgan, Flynn, Cobb et al's McMillan 1, cnw 9-13s-37w, dr 5240 ft.

McPHERSON COUNTY—C. E. Ash Drlg. Co.'s Broman 1, ne ne nw 19-17s-4w, dr 3340 ft. Wamhoff et al's Nuse 1, se ne sw 18-18s-4w, td 1850 ft, temp abnd. Dole-Park Dev. Co.'s Doles 1, ne nw ne 12-19s-1w, set 8-in csg 2775 ft, sd. Clyde Pulse et al's Boesker 1, se se nw 29-20s-1w, rig. C. R. Craft et al's Barnholt 1, sw sw se 30-20s-5w, td 3335 ft, 31 bbls oil per day on p. comp. Boyle & Grossman's Diener 1, se se ne 35-19s-1w, dr 23-5 ft.

MEADE COUNTY—Pacific Mid-West Oil Co.'s Rexford 1, ne se sw 8-30s-29w, sd 900 ft.

MITCHELL COUNTY—Geo. Siedhoff et al's Greiss 1, nw sw se 16-8s-10w, sd 4022 ft.

NESS COUNTY — Jones & Lane's Page Milling Co. 1, se se nw 36-18s-26w, fsg 3265 ft. Marshall Drlg. Co. et al's Anderson 1, sw sw nw 23-16s-24w, rot rig. Trojan O&G Co.'s Moses 1, csw nw 10-18s-25w, td 150 ft, sd. Continental Oil Co.'s Olson 1, sw nw nw 5-18s-25w, lcn.

OSBORNE COUNTY — Fred Chaddox & Atlantic's Slater 1, ne sw ne 33-10s-15w, dr 3805 ft. F. E. Fullerton & Sons' Moray 1, ne se sw 27-10s-12w, td 500 ft, D&A.

PAWNEE COUNTY—Stanolind & Amerada's Jentz 1, sw sw sw 25-20s-16w, dr 1970 ft. Phillips Pet. Co.'s F. A. Johnson 1, cne sw 8-20s-19w, mirt.

PHILLIPS COUNTY—C. W. Davidson et al's Elliff 1, se ne ne 35-5s-18w, sd 350 ft.

PRATT COUNTY—Skelly Oil Co. et al's Adams 1, se nw ne 2-28s-11w, fsg 4300 ft. Colonial Oil Co. et al's Hays 1, se se sw 4-26s-12w, dr 2420 ft. Pem Drlg. Co. et al's Holland 1, sw nw se 6-26s-12w, set 12-in csg 245 ft, woc.

RENO COUNTY—Sam Schneider et al's Kroecker 1, ne ne ne 12-22s-5w, dr 3045 ft. Street & Butler's Kincaid 1, ne ne nw 13-24s-4w, rot rig. Carey et al's McPheeters 1, ne ne nw 22-26s-8w, spd and sd. W. E. Witt et al's Fair 1, nw se se 4-22s-8w, dr 2670 ft. Cohen et al's Teter 1, se se sw 3-23s-5w, rig. Westgate-Greenland Oil Co. et al's Popp 1, sw sw ne 7-25s-4w, sd 2264 ft.

RICE COUNTY—Gillespie et al's Strong 1, ne ne nw 9-18s-8w, spd and sd. John Hanna et al's Marshall 1, ne nw nw 30-18s-8w, sd 1530 ft. Skiles et al's Campbell 1, se se ne 28-19s-9w, testing. Gerbrand-Pulse Oil & Drlg. Co.'s Wellman 1, sw sw sw 22-21s-9w, td 3327 ft, est 23,000,000 cf dry gas. Bell O&G et al's Timbers 1, nw nw ne 8-21s-8w, dr 3358 ft. Elbar Corp.'s Ehlers 1, ne ne se, td 3523 ft, D&A.

ROOKS COUNTY—W. W. Kiskadden et al's Ham 1, sw sw nw 25-7s-19w, spd 20 ft. Graham et al's Fike 1, sw sw sw 9-9s-17w, fsg. C. R. Craft et al's Ziegler 1, ne ne sw 8-10s-16w, dr 3243 ft. Superior Oil et al's Casey 1, se se se 35-10s-19w, dr 3200 ft. The Texas Co.'s McCarroll 1, cwl nw 29-10s-17w, dr 2377 ft. Colonial Oil et al's Tucker 1, sw se nw 23-10s-17w, rur. Texas Trading Co.'s Probst 1, sw sw ne 18-6s-19w, mirt. Producers Oil Co.'s Tucker 1, sw se nw 23-10s-17w, rur.

RUSH COUNTY—Wakefield et al's Zimmerman 1, se se sw 7-16s-18w, dr 3600 ft. Wakefield & Brouk's Kerbs 1, nw nw se 11-17s-16w, spd 360 ft and sd.

RUSSELL COUNTY—H. C. Eisenhour et al's Krouse 1, se se nw 18-13s-12w, spd and abd. Parks' Opdycks 1, sw sw sw 20-14s-13w, 800 ft oih thru 50 ft of cavings, sd. Emrichs et al's Anderson 1, ne se sw 33-15s-11w, spd and sd. Cities Service et al's Eichman 1, csw sw se 12-15s-14w, aw/4000 gals. Phil-Han Oil Co.'s Deines 1, ne ne nw 33-14s-14w, dr 2981 ft. Trapp Drlg. & Ramsey's Polcyn 1, ne ne se 34-14s-15w, td 3361 ft, pb to 3298 ft, D&A. Murfin & Vernon O&G Co.'s Pearson 1, ne ne ne 31-15s-15w, dr 450 ft. C. L. Price' Sebesta 1, ne ne ne 36-15s-11w, sd 2375 ft. Jones & Shelburne's Short 1, ne ne ne 12-15s-12w, bldg rig.

SEDGWICK COUNTY—Nat'l Ref. Co.'s Fee 1, se ne se 36-27s-2e, set 8-in csg 2468 ft, trying to kill gas. I. W. Murfin et al's Martin 1, se se nw 32-28s-1e, set 6-in csg 3489 ft, 3000 ft fih, co. W. C. Talbott et al's Downs Estate 1, se se nw 32-28s-2e, testing. Union O&R et al's Howell 1, sw sw sw 6-29s-1e, sd 2010 ft. Fulton et al's Fee 1, ne ne se 35-28s-1e, fsg 1550 ft. McKnab et al's Garrett 1, se sw sw 18-29s-2e, sd 100 ft. Continental Oil Co. et al's Oehlert 1, nw nw se 7-27s-4w, spd. Steinbuchel's Shaffer 1, sw sw nw 18-25s-1e, dr 1490 ft.

STAFFORD COUNTY—W. P. Faulkner's Moses 1, nw nw sw 9-22s-13w, sd 2170 ft. Fred Rust et al's Drach 1, ne ne sw 12-22s-13w, rust 3698 ft. Kessler O&G et al's Pinkston 1, ne nw nw 17-22s-14w, cor 3916-24 ft, no show. Torry & Feaster et al's Allen 1, nw nw se 34-22s-12w, td 3829 ft, D&A. Stanolind O&G Co.'s Tiechman 1, se se se 13-22s-13w, dr 3474 ft. Hannum Drlg. et al's Thole 1, ne ne ne 27-23s-12w, td 3882 ft, D&A. Stanolind O&G Co.'s Shank 1, se se se 17-24s-13w, dr 3340 ft. Torry & Feaster et al's McConnaughay 1, ne se nw 8-24s-13w, rur.

STEVENS COUNTY — United Producing Co.'s Beardsley 1, cn½ 12-31s-35w, set 7-in csg 2525 ft, woc.

SUMNER COUNTY — W. M. McKnab's Blair 1, sw sw sw 7-30s-1e, td 3869 ft, testing. R. J. Wixon's Newton 1, se se se 31-30s-2e, sd 2023 ft. Magnolia Pet. Co.'s Baird 1, sw se se 2-30s-4w, swb 782 bbls oil and 1500 bbls wtr, 20 hrs, to pb.

TREGO COUNTY—Phillips Pet. Co.'s Trego 1, cne nw 14-12s-23w, dr 4157 ft. Central Commercial Oil Co.'s Locker 1, csw 12-14s-22w, td 4731 ft, D&A. Thurman Hill et al's Lawson 1, sw sw nw 7-14s-22w, dr 1495 ft. R. E. McNely et al's Hille 1, cse ne 22-15s-24w, dr 3986 ft.

WALLACE COUNTY—H. F. Wilcox O&G Co.'s Parker 1, se se ne 9-11s-40w, dr 4860 ft.

WOODSON COUNTY—Charles Reeser et al's Weide 1, nw nw se 18-25s-14e, ru mach.

LOUISIANA

BIENVILLE PARISH—DeSoto O. &G. Co.'s Wm. Ashley 2, c sw se 15-16n-10w, rur. Gulf Oil Corp.'s Goodpine Oil Co. 1, se sw 25-14n-8w, dr 4990 ft. Hunt & Seaboard's Federal Land Bank 1, c s½ 10-16n-6w, 9⅝-in csg 2078 ft, dr 6658 ft lime & shale.

BOSSIER PARISH—L. W. Denis' D. T. Roos 1, sw nw nw 13-19n-12w, arr perf csg cemt test at 850 ft. Triangle Drlg. Co.'s Schuler A-1, 13-17n-12w, rocking with gas after swabbing & flowing oil, td 3118 ft.

CADDO PARISH—A. O. Olsen's R. T. Sharp 1, nw nw 15-18n-16w, dr 4269 ft. Prairie River Synd's Hutchinson 1, sw nw 15-15n-12w, elev 153 ft, top lower Marine 8380 ft, top Bodcaw sand 8775 ft, tested sg 8987-9110 ft, arr deepen td 9141 ft. W. J. Hunter's N. B. Stoer 2, sw sw 10-15n-15w, mim. A. D. Robinson et al's Dickson 1, 22-20n-14w, woc surf csg.

CLAIBORNE PARISH—J. B. Bond's Burgess 1, ne se ne 3-20n-5w, elev 276 ft, swabbing & flowing oil pb depth 5325 ft, old td 5800 ft. Lyons & Neely's Simms 1, c ne ne 32-20n-5w, cored porous lime showed sw 5800 ft, swab td 5930 ft. W. L. McClanahan's J. T. Lewis 1, sw se 25-20n-7w, 16-in csg 166 ft, woc 2150 ft. Union Power Co.'s (formerly United) et al's Brownfield 2, 6-19n-5w, dr 6955 ft. Hawks 1, 5-19n-5w, 5¾-in csg 5568 ft, woc td 5751 ft.

DE SOTO PARISH—Clear Lake Oil Co.'s J. A. Woolums 1, nw nw 29-12n-12w, cored sand so 2674 ft, woc 6⅝-in csg td 2694 ft. Wright Harris et al's (Kingston Oil Co.) C. B. Scott 1, ne ne 32-14n-13w, logged sand so 2748-65 ft, set 7-in csg 2748 ft, testing with so, td 2765 ft. Petroleum Heat & Power Co.'s J. W. Kavanaugh 1, 7-11n-11w, rur.

LINCOLN PARISH—E. H. Moore Inc.'s Commercial Bank 1, nw nw 22-18n-5w, top Blossom 3173 ft, elev 372 ft, sd 6000 ft. E. T. Oakes, H. D. Easton et al's N. L. Griggs 1, c sw 36-18n-1w, spd, setting sur csg. Gigantic Oil Co.'s R. L. Sanderson 1, nw se nw 13-18n-1w, sd 179 ft.

RED RIVER PARISH—Ark. Fuel Oil Co.'s Franklin Realty Co. 1, ne nw 20-11n-9w, rur.

SABINE PARISH—Fox & Phillips' Cook Land Co. 1, 1-9n-12w, spd dr 1895 ft. Odell Hinson's Long-Bell Lbr. Co. 1, 5-8n-13w, hfo, completed pumping 5 bbls oil daily, td 1811 ft.

UNION PARISH—Joe Modisett's Frost Lbr. Co. 1, ne sw 14-21n-1e, arr set 9⅝-in csg 4000 ft (7000 ft test).

WINN PARISH—Georgetown Oil Co.s Odom 1, c nw ne 36-11n-1w, dr 650 ft.

WEBSTER PARISH—V. L. Fosters J. M. Mixon 2, c se se 21-21n-10w, dr 7030 ft. Magnolia Pet. Co.'s Aarnes-Cox 4, sw ne ne nw 22-21n-10w, elev 196 ft, dr 8125 ft. Crichton 1, c ne nw 33-21n-10w, dr 4750 ft; J. T. Marshall 1, sw se 21-21n-10w, spd; Ohio Oil Co.'s Bodcaw 48, Acct. 4, 23-21n-10w, rur; Bodcaw 2, Acct. 4, 23-21-10w, rur; S. P. Coyle-Cox 1, c sw se 23-21n-10w, elev 200 ft, Bodcaw sand 8055 ft to 8105 ft, woc, td 8119 ft; D. W. Merritt 1, c sw sw 14-21n-10w, elev 189 ft, completed 364 bbls dist and 4 mil ft gas, td 8365 ft; W. Cox 1, spd dr 1850 ft. A. G. Oliphant's Sam Banks 1, c ne ne 34-21n-10w, elev 196 ft, Bodcaw sand 8121-75 ft, cemt 7-in csg 8122 ft, woc td 8185 ft. Standard of La.'s Davis 7, c ne nw 23-21n-10w, dr

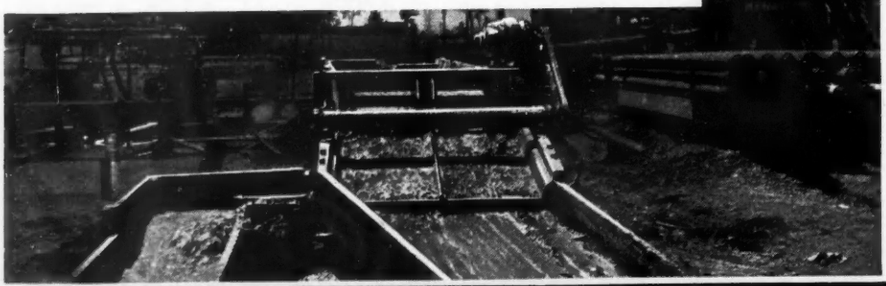
for Reconditioning Rotary Mud . . .

● The Link-Belt screen has proved by actual performance that it is the lowest cost method of reconditioning rotary mud. It has many exclusive advantages such as—larger screening area—longer life of screen cloth—ease of transportation—minimum head room required, etc. Send for Folder No. 1772

LINK-BELT COMPANY

Philadelphia Los Angeles New York Dallas Houston Tulsa

6015



LINK-BELT *Vibrating* SCREENS

7879 ft; Mrs. M. E. Gray 2, c ne nw 26-21n-10w, dr 7943 ft. Union Power Co.'s (United) J. M. Mixon 2, nw sw 22-21n-10w, rur; J. H. Tillman 6, ne ne 28-21n-10w, dr 5950 ft. Woodley Pet. Co.'s R. R. Cox B-2, sw sw 23-21n-10w, elev 229 ft, top Bodcaw sand 8095 ft, completed as gas distillate well, si for gauge, td 8140 ft; Gray B-5, sw ne 27-21n-10w, dr 3480 ft. Stanolind O. & G. Co.'s Pardee Company 1, c sw ne 36-21n-10w, rur. Magnolia Pet. Co.'s Sexton 1, c sw ne 32-23n-9w, mim.

SOUTH LOUISIANA

ACADIA PARISH—J. E. Daniel's Setting 1, Trilby prospect, 17-9s-1w, dr shale 2610 ft. Gulf's Broussard 1, Midland area, 49-10s-2w, dr shale 7209 ft. Humble's Sarver 1, South Crowley area, 35-10s-1e, woc 9526 ft. Magnolia's Duson 1, Iota prospect, 14-8s-2w, dr shale 7581 ft. J. G. Markley et al's Daigle Farms 1, Churchpoint area, 19-7s-2e, dr shale 7328 ft.

CALCASIEU PARISH—D & D Oil Co.'s Lutcher Moore 2, nw of Starks, 1-8s-13w, to dr ahead below 8597 ft. Federal Pet. Co.'s Sabine Tram 1, w of Starks, 25-8s-14w, dr shale 6210 ft. Union Sulphur's Bell 1, s of Sulphur, 10-10s-10w, dr lime 7568 ft. Wheeler Oil Corp.'s School Land 2, e of Gillis, 16-9s-7w, dk.

CAMERON PARISH — Humble's Miami Corp. 1, Catfish Lake area, 8-14s-5w, dr shale 7679 ft. Superior's State 1, in Gulf of Mexico, 4-15s-8w, dr shale 4712 ft.

EVANGELINE PARISH—Schlicher Prod. Co.'s Perkins 1, Pine Prairie area, 35-3s-1w, sd in salt at 4924 ft.

IBERIA PARISH—Jefferson Lake Oil Co.'s Lake Peigneur 414, Jefferson Island, 12-5e, sd 7071 ft. Texas Co.'s State 2-B, Vermilion Bay, 16s-5e, dr shale 7848 ft.

JEFFERSON DAVIS PARISH—Continental's Fay 1, se of South Roanoke, 31-10s-3w, dr shale 5918 ft. Union Sulphur's Calcasieu National Bank 1, e of Woodlawn, 12-9s-8w, dr rock 7674 ft. Humble's Stegall 1, nw of Welsh, 20-9s-5w, woc 2055 ft.

LAFOURCHE PARISH — Amerada and Louisiana Land & Exploration Co.'s South Coast Corp. 1, Raceland area, 34-15s-19e, dr shale 9100 ft. Gulf's State PP 3, Timbalier Bay area, 36-23s-21e, working with geophysics at 8727 ft in salt. William Helis' City of New Orleans 2, Marchland prospect, 19-23s-23e, dr shale 7010 ft.

PLAQUEMINES PARISH — Gulf's State QQ 3, Quarantine Bay, 17-19s-17e, to set csg at 8144 ft.

ST. JAMES PARISH—Continental's Realty Operators 1, Hester prospect, 17-12s-5e, lcn.

ST. MARTIN PARISH — Texas Co.'s St. Martin Land 10, Henderson area, 15-8s-7e, dr water sand 7951 ft; same operator's State 4, Lake Mongoulois, 14-10s-9e, piling.

ST. MARY PARISH—Texas Co.'s State 1, Bateman Lake area, 21-16s-12e, losing returns at 11,879 ft. Shell's Barbour 1, Glenwild, 21-15s-12e, woc 1935 ft.

TERREBONNE PARISH — Barnsdall Oil Co.'s Dibert, Starks and Brown 1, n of Gibson field, 10-16s-15e, dr shale 9761 ft.

VERMILION PARISH — Continental's Brookshire 1, Abbeville, 66-12s-3e, preparing to test at 7800 ft.

MICHIGAN

ALLEGAN COUNTY—Frank Vande's Chadbourn 1, 28-2n-3w, so & w Traverse, sd 1350 ft. Arnold & Cochran's Arnold 1, 26-4n-16w, driving 10 in 96 ft. S. B. Hood's Wright 1, 9-3n-13w, driving 10 in 50 ft.

BAY COUNTY—Fortney Oil Co.'s Smart 1, nw nw sw, 7-16n-5e, rig. Charles Weller's Dewyer 1, 20-16n-3e, dr 1400 ft. Stork Oil Co.'s Century 1, 9-17n-3e, dr 200 ft.

CLARE COUNTY—Wittmer Oil Co.'s Palomar 1, 2-18n-5w, dr 990 ft. McClanahan Oil Co.'s Mortenson 1, 9-18n-5w, fsg 1665 ft.

GLADWIN COUNTY — Durham & Jones' La Furgey 1, 20-17n-2e, dr 900 ft. Fortney Oil Co.'s Smart 1, 29-17n-2e, rig. Chapman Oil Co.'s State 1, 33-17n-2e, dr 850 ft. McClanahan Oil Co.'s Reua 1, 11-17n-1e, dr 1000 ft. C. E. McLaughlin's Simmons 1, 28-19n-2w, dr 1650 ft. Whitehill, Clovis & Drury's Bosley 1, 19n-1e, Dundee 3362 ft, so 3439 ft, water 3456 ft, pb to 3449 ft, testing. Daper Oil Co.'s Villeneuve 1, 11-20n-2w, dr 2850 ft.

GRATIOT COUNTY—Turner Pet. Corp.'s Wiley 1, 5-11n-3w, rigged. Red-Man Oil Co.'s Creaser 1, 18-11n-2w, dr 2940 ft. Sam Siegel's Kerr 1, 36-10n-1w, dr 2955 ft. Chartiers Oil Co.'s Bolyard 1, sw sw ne, 12-9n-14w, rig.

HURON COUNTY — L. D. Hendershot's Klamp 1, 1-17n-14e, sd 2029 ft. C. W. Teater's Martin 1, ne se ne, 15-15n-11e, dr 400 ft.

ISABELLA COUNTY—Rowmor & Cryden's Smith 1, 35-15n-5w, co 1400 ft. J. G. Zabel's Kennedy 1, 25-16n-4w, dr 780 ft.

MIDLAND COUNTY—Sun Oil Co.'s State B1, 5-16n-1w, dr 2100 ft. Daily Crude Oil Co.'s State 1, ne se se, 29-15n-2e, mim. F. M. Brown's Andrews 1, 27-16n-2w, abandoning location.

MONROE COUNTY — Milbourn Violette's Russell 1, 5-6s-7e, dr 1910 ft. R. D. Olmstead's Frink 1, 25-5s-6e, dr 310 ft.

MONTCALM COUNTY—H. L. Gentry's Christensen 1, 29-11n-8w, dr 910 ft. Hirzel-Leland's Hansen 1, 31-10n-7w, dr 805 ft.

NEWAYGO COUNTY — Midstates Corp.'s Eichenberger 1, 7-16n-11w, dr 1660 ft. Muskegon Dev. Co.'s Carlson 1, 9-16n-12w, fsg 3168 ft.

OTTAWA COUNTY — Albert Maring's Flagerl 1, 3-7n-14w, dr 100 ft. Morris Sutherland's Brandt 1, 36-5n-14w, fsg 406 ft.

ROSCOMMON COUNTY — Franklin Pet. Dev.'s Helen 1, se se sw, 26-23n-2w, rig. Maynard Smith's Eggleston Ranch 1, c nw nw, 32-21n-2w, dr 530 ft.

SAGINAW COUNTY—Bridgeport Oil Co.'s Tobias 1, 35-11n-5e, dr 1150 ft. Wever Oil Co.'s Uebler 1, 9-11n-6e, dr 1300 ft. Bond Oil Co.'s Schoonmaker 1, 1-11n-1e, csg 5 in 3200 ft. Doran & Hillard's Dobs 1, 33-11n-1e, testing 3189 ft.

MISCELLANEOUS COUNTIES

ALCONA—Thalman & Morris' Kohlman 2, 10-26n-7e, csg 5 in 2950 ft.

ARENAC—D. F. Jones' Sibley 1, 33-20n-7e, dr 60 ft.

LAKE—Cherry Valley Oil Co.'s Rice 1, 25-18n-12w, ur 610 ft, td 960 ft.

TUSCOLA—Frank Norton's Vorhees 1, 12n-11e, dr 1990 ft.

WAYNE—Huron River Oil Co.'s Scheffler 1, 26-3s-3e, dr 1660 ft.

WEXFORD—G. H. Schrack's Fee 1, 17-22n-9w, mim.

MISSISSIPPI

BOLIVAR COUNTY—Phillips Pet. Co.'s Perthshire 1, 2-24n-7w, dry abn, td 6009 ft.

CALHOUN COUNTY—B. G. Dowell's H. D. Hughes 1, 18-23n-9e, sd 1600 ft. Ed. Spencer's J. C. Conner 1, se ne 12-24n-8e, lcn.

CLAIBORNE COUNTY—Claiborne County Dev. Co.'s Ruth Hayden 1, s½ se 55-11n-2e, woc 10-in csg 200 ft.

FRANKLIN COUNTY—Fred E. Courson et als Homochitto Lbr. Co. 2, 300 ft n c 18-5n-3e, 13 in csg 60 ft, woc 10-in csg 500 ft.

GEORGE COUNTY—Cleve Love et al's J.

THE RIGHT PACKING in the Right Place!

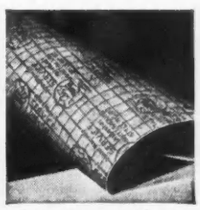
J-M Sea Rings. Absolutely automatic. Save power. Reduce wear on equipment. Last longer.

J-M Kearsarge Rod Packing. Retains its efficiency—note construction of center block.

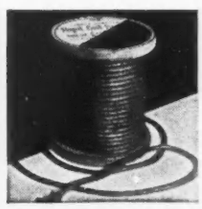
J-M Centripac. Plaited construction. Specially designed for centrifugal service.

J-M Flax Packings available in various styles to meet a wide variety of service conditions.

J-M Kearsarge Boiler Gaskets assure a perfect seal on handholes, manholes and tube plates.



J-M Service Sheet. Pliable. Resilient. Adaptable to all general sheet packing purposes.



J-M Mogul Packing. An excellent utility packing for general service.

FOR *complete* information on J-M's *complete* line of packings for the oil industry, send for the J-M Packings Catalog. Address Johns-Manville, 22 East 40th St., New York City.

Johns-Manville PACKINGS

For Every Oil Industry Service

JOHNS MANVILLE JM PRODUCTS

J. Newman Lbr. Co. 2, c sw 9-1s-8w, spd, arr set 10-in csg 1500 ft.

HINDS COUNTY—Southern Nat. Gas Co.'s Angelo Williams 1, ne nw 35-6n-4w, spd.

HARRISON COUNTY—G. A. Hesse et al's Hingen 1, c ne 12-7s-10w, dr 2440 ft.

KEMPER COUNTY—R. A. Keaton et al's Buckwalter Lbr. Co. 1, nec 6-10n-14e, dk.

LAMAR COUNTY—Sun Oil Co. et al's Mrs. Kate Talley 4, se nw 33-4n-15w, 13⅜ in csg 507 ft, dr 5290 ft. South Miss. Oil Co.'s Morris 1, sec 4-2n-14w, spd and sd.

PIKE COUNTY — Acadian Prod. Corp.'s Bales 1, c se nw 24-7n-2e, dk.

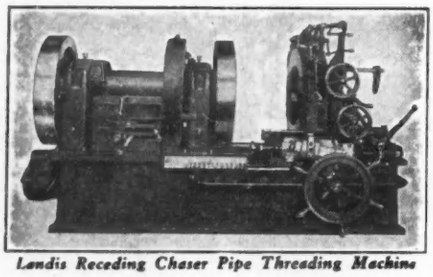
PERRY COUNTY—Phillips Pet. Co.'s J. J. Newman Lbr. Co. 1, se se sw 21-2n-10w, rur.

SIMPSON COUNTY—Goodwill O&G Co.'s Berry 1, 33-2n-4e, woc 10-in csg 60 ft.

SUNFLOWER COUNTY — Phillips Pet. Co.'s Dockery 1, sw ne 27-22n-4w, lcn abn. A. B. Taylor et al's Foster Creek Lbr. Co. 2, sw sw 31-4n-2w, mim.

YALABOUSHA COUNTY—Acme Holding Co.'s S. D. Boyle 1, nw nw 33-25n-7e, sd 125 ft. Skuna Dev. Co.'s Mrs. T. A Turner 1, se sw ne 25-25n-6e, sd 925 ft.

D. S. MAIR
MACHINERY CORPORATION



Landis Receding Chaser Pipe Threading Machine

COMPLETE LINES

Machine Tools—Metal Working Machinery—Bolt and Pipe Threading Machines Electric Arc, Spot and Butt Welders Hand Power and Electric Traveling Cranes—Monorail and Material Handling Equipment—Foundry Equipment Forge Shop Equipment

HOUSTON, TEXAS

4000 Clay Ave. **Telephone Fairfax 1466**

STANLEY MAIR

DALLAS, TEXAS

235 Allen Bldg. **Telephone 7-2874**

CHARLIE HARTER

MONTANA

CARBON COUNTY—R. C. Tarrant's Heare 1, c wl ne nw 14-6s-19e, dr 190 ft.

FERGUS COUNTY—Flathead-Lewistown Oil Co.'s 1, c ne ne 13-15n-18e, dr 350 ft. Whitetop Oil & Gas Co.'s 1, c ne sw 35-14n-19e, dr 825 ft.

PETROLEUM COUNTY—O. B. Canfield's Government 2, se ne ne 21-17n-24e, dr 750 ft.

ROOSEVELT COUNTY—Poplar Dome Syndicate's Fry 1, nw nw ne 21-26n-50e, dr 1340 ft.

TOOLE COUNTY—Montana Gas Corporation's Clark 2, c sw sw 24-37n-1w, dr 2050 ft. Model Oils Ltd.'s Fey 1, ne sw 5-37n-3w, abd 2930 ft.

YELLOWSTONE COUNTY—Broadview Dome Oil Syndicate's Halbritterl 1, ne ne sw 18-3n-23e, dr 3100 ft.

NEBRASKA

JEFFERSON COUNTY—L. R. Page et al's Bonham 1, se se 31-1n-1e, dr 2300 ft.

OKLAHOMA

ADAIR COUNTY—B. L. Maddox's Penn Mutual Life Ins. Co. 1, c s½ ne nw 5-16n-24e, dr 260 ft.

ATOKA COUNTY—C. M. Sheldon & Gardner Pet. Co.'s Lee 1, ne nw sw 2-4s-10e, co 1335 ft. Hagey et al's Becker 1, c ne¼ 4-1n-13e,td 3010 ft, to pb; Peck 1, c ne¼ 6-1n-13e, woc 2766 ft.

BECKHAM COUNTY — Mid-American Oil Co.'s Biscoe 1-A, sw sw sw 28-8n-22w, so 2213-20 ft, sd.

BRYAN COUNTY—Southern Oil Co.'s Henry 1, c nw ne 10-8s-7e, lcn.

CADDO COUNTY—Clyde Becker et al's Pharris 1, se se nw 24-6n-4w, td 6522 ft, temp abnd. I. T. I. O. Co.'s Dome-Bo 1, c ne se 29-6n-10w, pb to 4929 ft, re-dr at 5116 ft.

CLEVELAND COUNTY—Harper & Turner's Pollock 1, c w½ nw nw 13-9n-2w, dr 5656 ft.

CHOCTAW COUNTY—V. K. Chapman & Lowe's Hallum 1, nw nw ne 4-7s-20e, mach.

COAL COUNTY—Phillips Pet. Co.'s Beck 1, se sw sw 6-1n-9e, dr 4575 ft. Carter Oil Co. et al's Claytor 1, c w½ ne sw 27-2n-9e, cor 6263-71 ft, ssg, to cor.

COMANCHE COUNTY—J. W. Wolfe's Costinus 1, sw sw se 30-4n-11w, spd. Frank Scott's Kuntz 1-A, se ne se 27-4n-11w, sd 2800 ft.

COTTON COUNTY—Bowers & Wise's Pendergraft 1, nw se sw 4-4s-12w, der & pits. J. W. Amyx's Ash 1, se se se 7-4s-10w, rur.

CREEK COUNTY—M. W. Mosier et al's Holcomb 1, se sw ne 19-18n-8e, dr up swab.

GARFIELD COUNTY—H. R. Hollenback et al's Clark 1, nw nw nw 34-21n-6w, dr 3057 ft.

GARVIN COUNTY—Carter Oil Co.'s Potts 1, c e½ se nw 36-1n-3w, dr 3505 ft. B. C. D. Edwards' Clark 1, ne ne ne 16-3n-3e, td 2405 ft, wo 3-in dr pipe.

GRADY COUNTY—Gulf Oil Corp.'s Thomas 1, sw nw nw 14-4n-5w, fsg 8623 ft. Doyle Pet. Co.'s Huffine 1, nw nw se 30-5n-8w, der.

GRANT COUNTY — Magnolia Pet. Co.'s Reynolds 1, ne ne se 19-25n-5w, br & mit.

GREER COUNTY—J. I. Medlin et al's Broudie 1, nw nw nw 5-6n-20w, sd 865 ft.

HASKELL COUNTY—Continental Oil Co.'s Ferguson 1, sw se ne 33-8n-20e, td 7003 ft; bail to 6100 ft; 1,300,000 cu ft gas; rp 1280 lb, d & a.

HUGHES COUNTY—Phillips Pet. Co.'s Becker 1, ne nw sw 8-5n-10e, woc 4425 ft. E. H. Moore's Buck 1, c nw sw sw 21-8n-10e, td 4456 ft, 2nd Wx sand, d & a. Pure Oil Co.'s Rogers 1, se se ne 18-8n-12e, dr 3650 ft. Homer Doup et al's Band 1, ne ne nw 7-7n-9e, rust & sd.

JACKSON COUNTY—Ace Gutowsky et al's Booker 1, nw nw nw 33-2n-18w, td 1031 ft, d & a.

JEFFERSON COUNTY—Massad & Swansberger's Barrett 1, ne se se 14-6s-6w, sd 1890 ft.

JOHNSTON COUNTY—Patton et al's McCrummens 1, sw sw ne 16-1s-6e, sd 1380 ft. W. T. Shelton's Chapman 1, c nw nw 26-4s-6e, td 2182 ft, run 5-in csg.

KAY COUNTY—Fortuna Oil Co.'s Harris 1, sw sw ne 14-25n-1e, sd 303 ft. E. J. Shaffer et al's McKee 1, ne ne nw 20-28n-1w, spd. E. W. Jones et al's Dorse 1, se sw nw 25-26n-1w, rig & rur.

KIOWA COUNTY—Hughes & Reese's Fultz 1, se se se 10-6n-18w, sd 865 ft.

LINCOLN COUNTY—C. L. Carlock et al's Young 1, c n½ nw nw 23-15n-5e, dr 2730 ft. Riley & Talbott et al's Weidler 1, nw sw nw 20-17n-2e, cor 4905 ft. Ardie Oil Co.'s State 1, ne ne se 16-14n-4e, td 5035 ft, d & a.

LOGAN COUNTY—Anthony & Marshall's Fruin-Eckman 1, se se sw 4-16n-1e, so & g; sd 5181 ft. The Texas Co.'s Roper 1, c w½ sw se 22-15n-1e, dr 1865 ft.

LOVE COUNTY—Sinclair Prairie Oil Co.'s Peabody Seating Co. 1, ne ne ne 35-6s-2w, lcn.

MAJOR COUNTY—Ed Parsons' Patzkowsky 1, c nw¼ 10-20n-11w, rig.

MARSHALL COUNTY—Paul Robb et al's Vittitoe 1, c ne se 11-5s-4e, sd 720 ft. F. W. Merrick Inc.'s Robbinson 1, ne ne ne 33-7s-4e, dr 1750 ft.

MURRAY COUNTY—Power Oil Co. et al's Lancaster Trust Co. 1, c sw ne 10-1s-2e, td 4404 ft, d & a. O. O. Owens' Gryer 1, ne se ne 34-1s-3e, sd 2574 ft. Meyer & Greenup's Arbuckle Royalty Co. 1, nw nw ne 18-2s-3e, spd 48 ft & sd.

MUSKOGEE COUNTY—F. E. Cusack's Elliott 1, c nl nw sw 20-15n-20e, rog. Cusack's Fee 1, ne sw se 20-15n-20e, spd 65 ft.

NOBLE COUNTY—Seaboard Western Oil Co.'s Guthrie 1, nw nw ne 6-20n-2w, pot 165 bbls oil, 24 hrs, comp.

OKFUSKEE COUNTY—Burke-Greis' Rhea 1, sw sw se 14-10n-9e, ur 7-in csg 3101 ft. F. W. Merrick's Mackey 1, ne ne sw 29-11n-10e, dr 4037 ft. Mid-Continent Pet. Corp.'s Ireland 1, sw ne sw 10-13n-10e, rig.

OSAGE COUNTY—Nat'l Ref. Co.'s Page 2, nw sw se 28-22n-9e, td 2850 ft, d & a.

PAYNE COUNTY—H. S. Brim et al's McKenzie 1, c wl se ne ne 13-18n-3e, c & p. Stanolind O. & G. & Amerada Pet. Corp.'s Bennett 1, nw se ne 31-19n-4e, lcn.

PITTSBURG COUNTY — Okla. Dist. Oil Co.'s Beeler 1, ne ne sw 7-7n-14e, dr 5247 ft. Phillips Pet. Co.'s Gilcrease 1, nw nw se 16-7n-12e, dr 4502 ft.

PONTOTOC COUNTY—Norbla Oil Co.'s McBride 1, ne ne sw 10-2n-5e, lcn. Union Dev. Co.'s Abbott 1, sw nw ne 34-3n-6e, dr pipe stuck, sd. Boettcher O. & G. Co.'s Gann 1-A, se nw ne 25-4n-7e, sd.

POTTAWATOMIE COUNTY — Hightower's Baker 1, se se nw 27-6n-3e, tools moved out, sd.

PUSHMATAHA COUNTY—Erle Halliburton et al's Bagwell 1, sw ne ne 30-2s-15e, sd 5669 ft.

ROGER MILLS COUNTY — Central Pet. Corp.'s Lamb 1, se se se 27-14n-21w, c & p.

SEMINOLE COUNTY—Stanolind, Amerada and Mid-Continent Pet. Corp.'s Salina 1, se ne nw 4-5n-6e, sdo. T. F. Root's Cone 1, nw ne sw 11-7n-5e, c & p. W. B. Osborn et al's Harris 1, nw nw nw 11-6n-5e, lcn.

STEPHENS COUNTY — Coline Oil Co.'s Johnson 1, sw se ne 1-2n-8w, set 7-in csg 8971 ft, woc. Ed Parsons et al's Blake 1, c sw nw 22-2n-8w, dr 5115 ft. Newsoms' Pfile 1, sw sw sw 1-2s-7w, sdo 3551 ft; Cont. Comp. Jack Cohen's Pierce 1, ne ne nw 24-2s-6w, fsg 1672 ft.

TILLMAN COUNTY—Gulf Oil Corp.'s Prichard 1, se nw se 32-3s-16w, sdo 5715 ft. Tom Walker's Bowman 1, sw sw nw 10-4s-17w, sd 200 ft. Caven et al's Southerland 1, sw sw nw 35-4s-16w, sd 44 ft.

WASHITA COUNTY—L. B. McWhirter et al's Fee 1, nw sw sw 34-8n-19w, sd 1810 ft. John Koberg's Harms 1, nw nw ne 6-10n-16w, dr by stuck dr pipe at 4200 ft.

ELECTRICAL SALES ENGINEER

For Service In Foreign Oil Fields

Required immediately by large international organization: Services of a competent sales engineer thoroughly experienced in modern electrification methods used in oil fields. Must be able to originate specifications covering all electrical equipment right through power plant to well.

Write giving complete qualifications, experience, references and photograph. Address Box 331, care The Oil Weekly, Houston, Texas.

TEXAS GULF COAST

BRAZORIA COUNTY — Pure's Smith 1, Peach Point area, S. F. Austin sur, dr shale 3402 ft.

CHAMBERS COUNTY—Ingot and Merit Oil Co.'s Wright 1, Cedar Bayou area, C. Smith sur, testing 6437 ft.

FORT BEND COUNTY—Chapman Minerals Corp.'s Sugarland Industries 1, s of Sugarland, G. Brown sur, dr shale 1235 ft.

GALVESTON COUNTY—R. R. Gray et al's Eidman 1, n of Dickinson, A. Hatch sur, dk.

JEFFERSON COUNTY—Shell's McFaddin 1, McFaddin Ranch area, S. A. Pace sur, lost circulation at 1323 ft.

LIBERTY COUNTY—Humble's Sabine Tram 2, Devers area, M. Whittington sur, abn 9515 ft.

MATAGORDA COUNTY—Sun's Robbins 1, n of Citrus Grove, C. H. Vandeveer sur, woc 1934 ft.

WALLER COUNTY—J. Bryan Eby et al's Rice 1, Waller prospect, J. H. Stephen sur, dr shale 1300 ft.

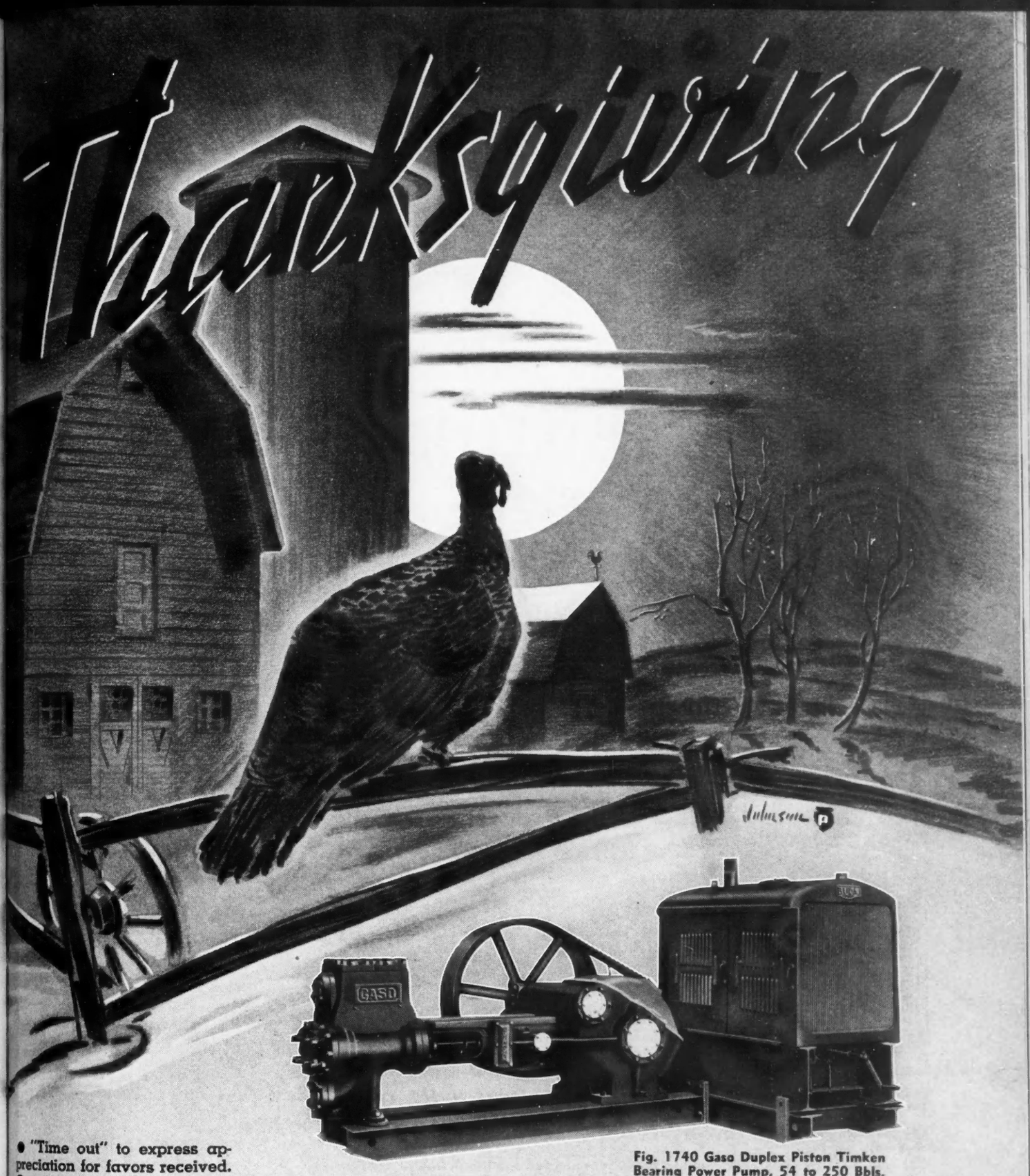


Fig. 1740 Gaso Duplex Piston Timken Bearing Power Pump, 54 to 250 Bbls.

● "Time out" to express appreciation for favors received. Our favors include the continued good will of oil men throughout the world. Through it, Gaso maintains its leadership in the field of oil-industry pumps. We appreciate your confidence—and will continue to merit it through advanced engineering and honest manufacture. . . . Gaso Pump & Burner Mfg. Co., Tulsa, Oklahoma. Export Offices: 149 Broadway, New York.

Complete Gaso Condensed Catalog, in 1937 Composite Catalog

GASO PUMPS
for every oil industry need

Builders of pipe lines for the

Oil and Gas Industry

B. & M. CONSTRUCTION CORPORATION

1313-15 PETROLEUM BUILDING

OKLAHOMA CITY, OKLAHOMA

Phones

7-8844 8-2685

Earl A. Benson, President Wm. V. Montin, Sec'y-Treas.

GET ACCURATE RESULTS—*Quickly, Easily with this improved CURTIN Centrifuge*

You can maintain the required speed for the period of the test with much less effort. They are heavy duty type, rigidly constructed, and extremely simple in design. The cranks and heads for 15 c.c. and 100 c.c. machines are interchangeable.

Get details from this bulletin, available to you for the asking →

No. 3480 W. H. CURTIN & COMPANY, INC. HOUSTON, TEXAS

SOUTH TEXAS

DUVAL COUNTY—V. L. Blanchard's Rosa V. de Puig 1, Santos Flores gr, well flows when swabbed, quit swabbing and si well to build up pressure, well flows till pressure drops then si to build up pressure, td 5437 ft. Gier & Kone's W. R. Peters 2, sur 38, dst 1792-1812 ft, rec 1400 ft sw, dr 1975 ft. Frank J. Gravis' F. Vaello et al 1, San Andres gr, mim. Lockhart Bros.' R. J. Rogers 1, sur 277, dr 2510 ft. Magnolia's DCRC 1, BS&F sur 261, dr 1685 ft; No. 1 D. Ruiz, sur 190, coring 5188 ft. Slaughter & Hugle's J. B. Hunter Est. 1, Poitevent sur, abnd 4732 ft. Smith & Hamill's 1, Poitevent sur, abnd 3045 ft. Wellington's J. F. Welder Heirs 8-D, cored oil sand in Cole 1710-20 ft, 7 min dst with seat at 1714 ft, flowed plo, 50 pounds pres, prep to run csg, opens new Cole field for area.

JIM HOGG COUNTY—Darby Pet. Co.'s R. Holbein 1-A, Las Animas gr, reaming 3075 ft. French Oil Corp.'s Paula V. de Garza 7, sur 269, abnd 1063 ft.

McMULLEN COUNTY—Alabama Minerals' M. Gordon 2, AB&M sur 127, coring 1720 ft. Gilcrease O&G Co.'s A. C. Miles 1, Charles Stephens sur, mim. V. G. Schimmel et al's L. Kountz Est. 1, ET RR Co. sur, dr 2175 ft. C. C. Schumway's Shiner Ranch 11, G. J. Goode sur, plug and abnd 1887 ft.

STARR COUNTY—J. L. Collins & Co.'s A. Guerra 1, San Jose gr, dr 4225 ft. Dean Bros.' M. Valadez 1, por 84, still wo pump, td 1873 ft. K. E. Merren's Starr County 1-A Jefferies & Lambeth subd, building drk to wo 5615 ft. Moss & Heard's S. B. Ricaby 7, J. of Camargo, dr 1060 ft. Sun 1-F H. P. Guerra, J. S. Garcia gr, spudded. Transwestern's T. B. Slick School 1, sur 266, rec 1825 ft dr stem, still cutting.

WEBB COUNTY—Mills Bennett Prod. Co.'s A. E. Gates 1, blk 28, dr 50 ft; Maria G. Martin 2, sec 258, coring 1876 ft. O. W. Killam's J. G. Garcia 1, blk 26, coring 2360 ft. Lemp Oil Co.'s N. H. Clark 1, por 33, woc 80 ft. C. H. Lewis' C. G. de la Garza 1, sec 48, ru.

ZAPATA COUNTY—W. C. Bob's J. M. Martinez 2, reaming to set 4¾ in at 990 ft.

SAN ANTONIO DISTRICT

ATASCOSA COUNTY—Brown & Bell's G. C. Atkins 1, sur 3, BS&F, abnd 6004 ft. L. W. Stieren's T. A. Crawford 1, J. O. Crawford sur 69, dr 2925 ft.

BASTROP COUNTY—R. Olsen Oil Co.'s Mattie Murchison 1, A. Litton sur, mir to wo. O. Raesz & O. Wolters' I. Wolters 1, M. Green sur, lcn. Sun Rise Oil Co.'s H. B. Smith 1, E. Standifer sur, reinstate for workover, 2502 ft.

BEXAR COUNTY—Ed. Auge's J. A. Hernandez 1, F. L. Paschal sur 52, dr 547 ft. C. J. LeComte's A. Herbst 1, Manuel Leal sur, still sd 700 ft.

CALDWELL COUNTY—Belcher & Schreiner's Mrs. G. Moody 1, Seal sur, dr deeper 2140 ft. Ellmag Oil Corp.'s W. Pipe 1, J. D. Rains sur, dr plugs 2730 ft. Fain Gillock's Chas. Kelley 1, F. Berry sur, may set csg, had slight oil show, 1692 ft. Heard & Heard's R. E. Brown 1, P. B. McCearley sur, sd 2280 ft. Marts & Beavans' Mrs. J. W. Miears 1, W. C. Swearingen sur, abnd 2300 ft.

COMAL COUNTY — John R. Yates' E. Heidrick 2, A. M. Holbrook sur 423, abnd 1867 ft.

EDWARDS COUNTY—Dan Auld et al's L. K. Henderson Est. 1, HE&WT sur, dr 475 ft. Evans & Love's Steve Brown 1, GWT&P sur, mim to deepen from 3002 ft.

FRIO COUNTY—Amerada's R. Melms 1, N. C. Alexander sur, still wor. Pagenkopf & Jamison's Houston Est. 1, J. Figuerroa sur, could not run potential test, too much BS and acid wtr left in hole, well still cleaning and heading gas every 8 seconds, trying to flow.

GUADALUPE COUNTY—Carver & Kellison's Mrs. H. M. Rumpf 1, J. W. Burnham sur, flowing through ¼ in ch, no gauge, rept 25 bph, bldg more storage, another says 42.2 bph on 18 hr test, 26.4 gr, ¼ in ch, cp 300. E. D. Hearn's B. Rudelow, J. D. Clements sur, prep to mim. Housel Oil Corp.'s N. J. Carter 2, S. Highsmith sur, dr 1125 ft. Mehu Oil, Inc.'s Wm. F. Schulze 1, Felix Chenault sur, dr 1350 ft. Moon O&G Co.'s Gus Penshorn 1, V. Duron sur, temp abnd 714 ft. R. Olsen Oil Co.'s S. C. Lillard Est. 1, John Tom sur, abnd 2055 ft. Wellington Oil Co.'s A. Koepp 1, Wm. H. Smith sur, ru.

MAVERICK COUNTY — Wellington Oil Co.'s Chittim Ranch 1, I&GN RR sur, testing on pump, showing acid water and some oil 3287 ft.

MEDINA COUNTY—Scoggins & Saunders' L. W. Burell 1, Mary E. Gage sur 395, sd 1875 ft. M. L. Walker's E. Riff 1, L. Hans sur 43, dr 620 ft.

MILAM COUNTY — Kingdorr Exploration Co.'s M. Stidham et al 1, J. P. Jones sur, ran tester, will set casing 3816 ft.

TRAVIS COUNTY—W. O. Coffee et al's B. F. Bremand 1, S. Del Valle gr, dr 510 ft. D. E. Hamer's J. B. Benson 1, W. Wilson sur,

rept dr 595 ft. C. O. LaShelle and N. D. Gardner's Annie T. Giles 1, Sanders sur, dr 525 ft.

WILSON COUNTY—O. A. Arnold et al's T. F. Black 1, S. & J. Arocha sur, sd 825 ft. Diamond Half Oil Co.'s R. C. Donaho 1, J. Reynolds sur, prep to abnd and skid over for new test 5203 ft. Pat Higgins' Mrs. Annie Higgins 1, A. Trevino sur, changed to heavier dr stem, resumed dr 1815 ft. Wm. D. Parkinson's O. F. Burney 3, S. & J. Arocha gr, underreaming 7 in 638 ft.

CORPUS CHRISTI DISTRICT

BEE COUNTY—James R. Dougherty's Fee 1, Pat Carroll sur, spudded.

BROOKS COUNTY — Standard of Texas' Mestina O&G Co. 1 (lse. 1), R. G. Salinas sur, td 4618 ft, pb, td 3568 ft, perf 3538-60 ft, flowed 168 bbls fluid 65 percent sw, 16½ hrs, 3/16 and ¼ in ch, tbg 500, csg 1290 pounds, si pres 1330, large vol gas; Mestina O&G Co. 10 (lse 1), cem 5½ in at 2466 ft, td 2481 ft.

DE WITT COUNTY—K. K. Howeth et al's F. G. Gips 1, W. A. Moore sur, mir. Whitex Co.'s J. G. Kerlick 1, Marcus Sowell sur, abnd 4407 ft.

GOLIAD COUNTY—Rual B. Swiger et al's Carrie Wood 1-B, J. Shearn sur, dr 1200 ft.

HIDALGO COUNTY—Atlantic Refg. Co.'s Mrs. E. T. McCalip 1, sec 175, coring 7905 ft. D. Davenport et al's Hidalgo County Distirict, td 8005 ft, perf 7906-16 with 20 shots, cleaning into pits, show considerable gas, some wash wtr and dist. Gulf States' Delta Orchards 2, dr 4285 ft. Y & B Oil Co.'s Waite Bros 1, Los Ejidos gr, dr 5165 ft.

JACKSON COUNTY—Hargrove & Echols' M. Strauss 1, A. M. Clare sur, dr 830 ft. Hargrove & Crosby's Hodges 1, La Ward Farms sur 7, mi drk. Texas Co.'s Mortgage Land & Inv. Co. 1, Morris & Cummins sur 3, dr 4825 ft.

JIM WELLS COUNTY—Magnolia's A. A. Seeligson 7, Los Jaboncillos sur, coring 7795 ft. Pratt & Tsesmelis' J. R. Talbert 1, La Vaca gr, dr 5054 ft. Smith & Story's B. Dansard 1, sec 72, dr 2725 ft.

KENEDY COUNTY—Sal Vieha Oil Corp.'s Garcia Land & Cattle Co. 1, San Juan de Carricitos gr, dr 3510 ft.

LIVE OAK COUNTY—Lewis Franklin's L. Odem 1, R. Everett sur, set 10 in 104 ft, woc. Reynosa Oil Co.'s B. Alexander Chestnutt 1, Luis Ayres sur, abnd 1254 ft; W. O. Nichols 1-A, Simeon Ryan sur, ru. Standard of Texas' E. C. Nicholson 1, J. T. Shannon sur, abnd 3993 ft.

NUECES COUNTY—Culton & Meaders' J. L. Bailey Est. 1, blk 65, dr 3807 ft. Lockhart's Ollie Purl 1, sec 7, td 7392 ft, comp pb td 4848 ft, 27 bbls dist 53-1/5 mcf gas daily, ¼ in ch, tp 1300, cp 1360 pounds. Richardson's B. Cunningham 1, sec 77, dr 2465 ft. Sannix Oil Co.'s Emil Nesloney 1, Casa Blanca gr, coring 4610 ft. Seaboard's James Luby 4, Canutillo Ditch Colony sur, cleaning, no gauge 5063 ft; John Luby 1, Canutillo Ditch Col. sur, td 5079 ft, 7 in 5079 ft, perf 5071-74½ ft, flow 139.24 bbls oil, 24 hrs, ⅛ in ch, 49.6 gravity, cp 1050, tp 800. Southern Minerals Corp.'s Richard King 2, blk 6, coring 6225 ft. Sultex Oil Co.'s L. M. Vance 5, T. Gallagher sur, dr 8275 ft. Union Prod. Co.'s C. L. Galladay et al 1, R Garcia gr, prep to spud; A. B. Simmonds 1, Agua Dulce gr, dr 4325 ft; T. S. Schroeder 1, de la Fuentes sur, comp, 5 in at 6919 ft, perf 6835-45, 120 bpd, high gravity dist, 3/16 in ch, tp 2920, cp 3050.

REFUGIO COUNTY—Hogan Oil Co.'s J. S. Kelly 1, James Power sur, dr 5165 ft. Illinois Pet. Co.'s M. H. Ryals Est. 1-C, Refugio Town gr, set 5 in at 7141 ft, woc, will perf in 6700 ft sand.

SAN PATRICIO COUNTY — Argo Oil Corp.'s A. Soehnge 1, P. J. & M. Delgado gr, dr 5935 ft. H. J. Porter et al's J. H Schmalsteig 1, sec 9, abnd 6515 ft Pat Rutherford's W. T. George 1, Saddler & Gracia surs mir.

VICTORIA COUNTY — Gulf's Mahon & Buehler 1, J. Poitevent sur 2, coring 6699 ft. Stanolind O&G Co.'s Henderson & Pickering 1, E. Benavides sur, still cutting dr pipe 7468 ft.

WILLACY COUNTY—Magnolia's F. Armendiaz 1, San Juan de Carricitos gr, dr 5705 ft. Shell Pet. Corp.'s Yturria Cattle Co. 2, San Juan de Carricitos gr, coring 7614 ft.

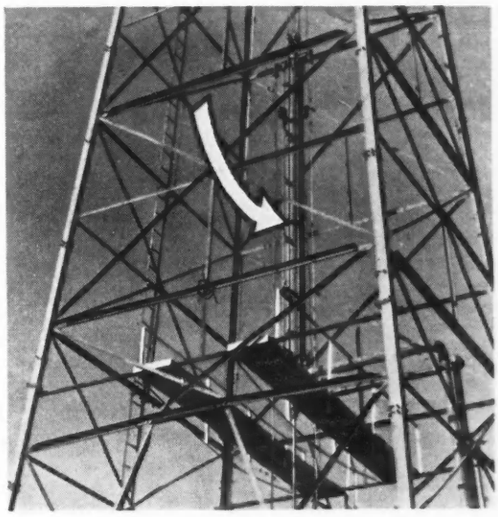
WEST TEXAS

(This report is confined to Ordovician, Delaware, and prospects west of the Pecos River)

BREWSTER COUNTY—Floyd C. Dodson & Duffy's Texas American Synd. 1-A, near c ne ne GH&SA Ry. sec 66, blk 10, elev 4228 ft, top Delaware shale 2297 ft, sd for csg 6018 ft. Tony Hess et al's Mrs. M. Decie 1, sec 7, blk 1, Georgetown Ry. Co. sur, sd 925 ft. G. H. Storey et al's J. P. Wilson 1, c se nw of T. & St. L. Ry. sec 3, blk 212, elev 3609 ft, sd for csg 2545 ft.

CRANE COUNTY—Gulf Oil Corp.'s M. B.

ONLY SULLIVAN PUMPHEADS OFFER 3-FOLD PROTECTION



The 3-fold sucker rod protection offered by Sullivan Pumpheads consists of the long stroke, the giant shock absorber effect and the positive limit on the strength of the up-stroke pull.

The long strokes, anything up to 15 feet, bring the inertia forces within the limit of the safe working stress.

The giant shock absorber effect greatly reduces and generally eliminates the very destructive vibratory stresses.

The positive limit on the strength of the up-stroke pull prevents the rods being pulled apart, if the plunger sticks.

No other pumping unit has all three of these important safety features.

SULLIVAN MACHINERY COMPANY
1914 COMMERCE ST. DALLAS, TEXAS

Representatives: **Denver:** 1815 California St., Phone Keystone 6334; **El Paso:** 117 No. Kansas St., Phone Main 757; **Los Angeles:** 2900 Santa Fe Ave., Phone Kimball 5137; **New York:** 30 Church St., Phone Courtland 7-6545; **Oklahoma City:** 532 N. W. Eubanks St., Phone 5-9026; **Tulsa:** 321 Wright Bldg., Phone 3-2250; **Alvin, Texas:** P. O. Box 453, Phone 97;
Executive Offices: **Chicago, Illinois**

SULLIVAN PUMPHEADS

You'll Strike Plenty of Comfort...

if you head for the Savoy-Plaza when you arrive in New York. Overlooking Central Park and convenient to all of the city's attractions, this hotel is famous for its cheerful rooms, excellent service, tempting cuisine and popular entertainment.

SAVOY-PLAZA

Henry A. Rost, Managing Director • George Suter, Resident Manager
FIFTH AVENUE, 58th TO 59th STREETS • NEW YORK

William M. Barret, Inc.
Consulting Geophysicists
Specializing in Magnetic Surveys
Contracts accepted for domestic and foreign projects, using the most improved instrumental and interpretative technique.
GIDDENS-LANE BUILDING
SHREVEPORT, LOUISIANA

Fifteen Years Practical Experience
REPRESSURING
JO H. CABLE
PETROLEUM ENGINEER
Wichita Falls, Texas

DAVID DONOGHUE
Consulting Geologist
Appraisals • Proration • Statistics
Fort Worth National Bank Building
FORT WORTH, TEXAS

THE FORT WORTH LABORATORIES
Analyses of oil field brines, cores, gas, oil, and minerals. Field gas testing. R. H. Fash, Vice-President; Long distance 138. 823½ Monroe Street, Fort Worth, Texas.

GEOPHYSICAL SOIL SURVEYS FOR OIL
10 Sample Survey $50. Total Cost: Mid-West

GEOLOGICAL SCIENTIFIC SERVICE CO.
FORT WORTH 957 E. Davis TEXAS

PATENTS
Patents, Trade Marks, Copyrights and Infringement Litigation
HARDWAY & CATHEY
428-29-30 Bankers Mortgage Bldg.
Phone Capitol 9756 Houston, Texas

We BUY, SELL and RENT
Oil Well Drilling Machinery and Drill Pipe . . . thoroughly reconditioned . . . at a profit to you.
Call or Wire for Prices
NEAL LUCEY COMPANY
2107 QUITMAN ST.-PRESTON 9611
HOUSTON, TEXAS

JACK A. SCHLEY
Patent Attorney
(Established 1902)
PATENTS—INFRINGEMENTS—OPINIONS
San Antonio—Washington, D. C.
2014 SECOND NAT'L BK. BLDG.—HOUSTON
1807-11 TOWER PETROLEUM BLDG.—DALLAS

McKnight 3, near ne sw ne of PSL sec 9, blk B-21, Ordovician test, elev 2693 ft, dr 2950 ft; W. N. Waddell et al 6, c ne sw of PSL sec 4, blk B-27, elev 2549 ft, Ordovician test, dr 5225 ft. Wilcox O&G Co. et al's M. B. McKnight 1, c se nw of G&MMB&A Ry. sec 9, blk 46, elev 2773 ft, Ordovician test, top Yates 2380 ft, fsh drill pipe 6177 ft.

CROCKETT COUNTY—Moore Bros. Corp. et al's Paul Perner 1, c nw¼ of I&GN Ry. sec 37, blk 2, elev 2560 ft, Ordovician test, top lime 1600 ft, dr 7370 ft.

CULBERSON COUNTY—Jarrell, Earl Bell & Harrison's Caldwell 1, c sw of PSL sec 15, blk 109, Delaware test, sd 151 ft.

JEFF DAVIS COUNTY—H. F. Wilcox O&G Co.'s Jones-Coffield 1, NEc of H&TC Ry. sec 121, blk 4, crooked hole 3320 ft.

EL PASO COUNTY—Tri-State Oil Co.'s Chas. & L. M. Kinkel 1, ne ne ne sec 237, S. F. No. 7232, sd 3171 ft.

TOM GREEN COUNTY—Humble's Lewis & Wardlaw 1, near c ne se H&TC Ry. sec 5, blk 17, Ordovician test, elev 2142 ft, fsh csg 1545 ft.

HUDSPETH COUNTY—Haymon Krupp Oil & Land Co.'s K. S. Briggs 1, nw nw nw T&P Ry. sec 24, blk 73, Tsp. 7, dr 1010 ft; S. J. Thaxton 1, near SEc ne se T&P Ry. sec 34, blk 74, Tsp. 6, ur 7 in, td 3250 ft.

LOVING COUNTY—Barnett Pet. Corp.'s W. D. Johnson 1-A, se se ne T&P Ry. sec 12, blk 56, Tsp. 1, elev 3044 ft, Delaware test, dr 2190 ft; W. D. Johnson 1-B, ne se se T&P Ry. sec 2, blk 57, Tsp. 1, elev 2910 ft, top Delaware lime 3089 ft, top sand 3131 ft, show o&w 3153-74 ft, pb to 3131 ft for shot. Carpenter, Grierson et al's B. Barnes 1, se se sw PSL sec 22, blk C-25, lcn. Continental Oil Co.'s E. C. Marrs 1, near SEc nw of T&P Ry. sec 20, blk 54, Tsp. 2, elev 2894 ft, top gray lime 4015 ft, top Delaware lime 4227 ft, top sand 4363 ft, 900,000 ft gas 4290-93 ft, dry and abd hfw at 4326-44 ft. Michigan O&G Co.'s M. Kyle 5, ne ne se T&P Ry. sec 20, blk 55, Tsp. 1, lcn; M. Kyle 6, nw se ne sec 20, rur. Woodley Pet. Co.'s TP Land Trust 1, NWc n½ s½ of T&P Ry. sec 21, blk 55, Tsp. 1, dr by junk 2360 ft.

PECOS COUNTY — Aero Gas Ref. Co.'s Johnson-Skelly 1-A, n½ of H&GN Ry. sec 40, blk 8, dr 360 ft. Mike L. Benedum et al's J. C. Trees 1, sw sw sw H&GN Ry. sec 9, blk 8, Orodovician test, elev 2528 ft, dr anhydrite 4375 ft. F. A. Bond et al's O. W. Williams 1, near c sw se of GC&SF Ry. sec 3, blk 114, sd 210 ft. E. P. Cravens et al's J. C. Trees 1, ne nw se H&GN Ry. sec 63, blk 8, sd 2273 ft. J. J. Dorr et al's Payton 1, near se nw nw of H&GN Ry. sec 99, blk 8, elev 2439 ft, water sand 1628-30 ft, fsh 1633 ft. D. W. Francis et al's Westerman 1-A, NWc 186-ac lse, Rubian Phares sur, blk 166, elev 3155 ft, dr 2645 ft. Humble O&R Co.'s F. N. Belding 1, ne se sec 99, blk ow, elev 3085 ft, sandy-lime pay 2450-51 ft, filled 1100 ft 16.6 gravity oil 9 hrs, with little water showing. Magnolia Pet. Co.-Superior Oil Corp.'s J. H. McKee 1-A, near nw nw sw H&GN Ry. sec 24, blk 9, Ordovician test, elev 2385 ft (jkd twice), trace gas 3100-03 ft, dr lime 4745 ft. T. N. Sloan, F. E. Lewis and Sloan-Zook Co.'s Dow Puckett 1, sw sw sw of E. L. & RR Co. sec 3, blk 100, dr 2070 ft. Thompson & E. R. Minshall's Michaelson 1, c nw nw of T. & St. L. Ry. sec 24, blk 146, machine. Stanley A. Thompson et al's Elsinore Cattle Co. 1, se¼ of GC&SF Ry. sec 53, blk D, Ordovician test, elev 3938 ft, drilled by junk, dr 5810 ft. Trans-Pecos Oil Co.'s F. M. Gallaher 1, ne ne nw T&P Ry. sec 9, blk 51, Tsp. 10, sd 1475 ft; Popham Land & Cattle Co. 1-B, s½ of GH&SA Ry. sec 235, blk 11 (3rd hole), sd 1120 ft. H. F. Wilcox O&G Co.'s Cerf 1, near c ne sw of T. & St. L. Ry. sec 27, blk 130, lcn.

PRESIDIO COUNTY — Brite Production Co.'s L. C. Brite 1, ne¼ of GH&SA Ry. sec 113, blk 12, tested 2½ bbls oil daily at 4367-75 ft, sidetracked at 3405 ft.

REEVES COUNTY—Barnett Pet. Corp.-J. C. Hill and Continental Oil Co.'s Ely-Healy 1, c nw of PSL sec 38, blk 71, elev 3166 ft, Delaware test, top Castile 865 ft, sd 1530 ft.

SCHLEICHER COUNTY—John M. Cooper et al's Bert Page 2, c ne se GH&SA Ry. sec 40, blk L, elev 2289 ft, Ordovician test, td 4710 ft, dr by 7 in csg. Tex-Tor Oil Corp.'s Judkins-Spencer 1, c sw¼ of A. & B. sec 33, blk A, elev 2235 ft, ur 8 in, td 3755 ft.

SUTTON COUNTY—Ordovician Oil Co.'s J. T. Evans 1, ne ne ne sec. 1, blk V-26, Lucy Stubblefield sur, elev 2126 ft, top Canyon, trace oil and gas, 2320 ft, top Strawn, carrying water with oil odor, 2860 ft, top Bend lime 3198 ft or 3315 ft, hfw 3468-75 ft, lowering 7 in csg.

TERRELL COUNTY—R. A. Basurto et al's J. H. Phelps-Bates 1, near SEc nw¼ sec 5, G. W. Turley sur, A-4, Ordovician test, elev 2185 ft, sd 5600 ft. D. & S. Oil Co.'s Sam Bell 1, near SWc ne sw of E. L. & RR Co. sec 68, blk D-7, sd 345 ft.

WARD COUNTY—Magnolia's Geo. Sealy 1-79, ce ne ne sec 79, blk F, G&MMB&A sur, Delaware test, dr 2110 ft.

EAST TEXAS

ANDERSON COUNTY — Humble O&R Co.'s Southern Pine Lumber Co. 5-A (210-ac), John Morton sur, 2 mi ne Jarvis, elev 339 ft, top Woodbine 4284 ft, top Georgetown lime 5040 ft, dr shale and lime shells 7220 ft.

CHEROKEE COUNTY—Merica Oil Co.-W. L. Stone's Cherokee Dev. Co. 1, A. J. Acker sur, 2 mi e Maydelle, dk. John G. Mayo et al's Holmes Bros.-Pure 1 (108-ac), C. F. Noble sur, 3½ mi se Lone Star, elev 410 ft, dr chalk 3150 ft. E. H. Moore, Inc. et al's Chronister Lumber Co. 1 (8000-ac), John Durst sur, blk 3, 3 mi ne of Wells, Pecan chalk 4630-4980 ft, base Austin chalk 5700 ft, top Woodbine 5704 ft, tested water 5726 ft.

DALLAS COUNTY—Mauldin Oil Co.'s W. E. Howell 1 (107-ac), S. Layton sur, 8 mi e Grapeland, sp and sd.

DELTA COUNTY—O. W. Killam et al's Delta Farming Assn. 1, J. Dollahite sur, 4 mi ne Sulphur Bluff, dk.

FREESTONE COUNTY—C. E. Rossiter et al's J. P. Fulton 1 (441-ac), J. P. Fulton sur, sd 956 ft.

GREGG COUNTY—Humble O&R Co.-Gulf Oil Corp.'s E. D. Robertson 1 (11.4-ac), M. Mann sur, 2½ mi w by s of Longview, 4 mi e production, elev 272 ft, Austin chalk 3202-3341 ft, top Georgetown lime 3341 ft, top Paluxy 4541 ft, top First Glen Rose 4876 ft, top anhydrite stringer 5617 ft, top massive anhydrite 6225 ft or 6214 ft, base Springer 6535 ft, showed about 1,000,000 ft gas on dst at 6562-78 ft, dr 6730 ft.

HENDERSON COUNTY—E. B. LaRue et al's Breedlove-Mills 1 (232½-ac), J. Dunn sur, 5 mi nw LaRue, rur. Sherman Hunt, DeArman & McMillan's A. R. Dillard 1 (840-ac), H. Jeffrey sur, 9 mi sw Mabank, elev 361 ft, top Woodbine 3093 ft, top Georgetown 3720 ft, top

Insurance on Oil and Gas Properties
•
Nationwide Engineering, Rate and Safety Service.
•
Inquiries Solicited Through Your Agent or Broker.
Cravens, Dargan & Company
Insurance Managers
HOUSTON, TEXAS
Established 1903

San Jacinto Inn
located at
THE HISTORICAL
San Jacinto Battle Grounds
You'll enjoy our delicious
Sea Food and **Chicken Dinners**
Music and Dancing . . . Open every day except Monday
Noon 'til Midnight
A Real Texas Welcome Awaits You

MAILING LISTS
Of The Oil Industry
Up-to-Date — Guaranteed
OIL INDUSTRY MAILING LIST CO.
909 Tulsa Loan Bldg. Tulsa, Okla.

County Ownership & Oilfield Maps
ZINGERT FORT WORTH ZINGERT
OIL MAP COMPANY

Paluxy bet 4689-90 ft, top first anhydrite betw 5569-79 ft, massive anhydrite 5729-5899 ft, coring 6450 ft. Wm. McDougal, Tr., et al's Trinity Farm Securities Co.-R. M. Manning 1 (200-ac), H&TC Ry sur, 4 mi s Malakoff, dk. Tide Water Associated-Seaboard & Humble's McElreath-Suggett 2-C (149-ac) W. P. Wyche sur, 1½ mi nw Opelika, elev 452 ft, top Georgetown 5070 ft, top Paluxy 6087 ft, top first Glen Rose 6282 ft, top anhydrite 6991 ft, massive anhydrite 7315-7713 ft, flowed water at 7830 ft, top Pettit 8510 ft, top Travis Peak 9073 ft, td 9320 ft, pb to 9255 ft, washed hole and showed gas, cem 7-in 9194 ft and will perforate.

HOPKINS COUNTY—Abbott & Rutland's Peyton 1, J. Burkham sur, 2 mi n Sulphur Bluff, cem sur cas.

HOUSTON COUNTY—E. R. Mount Branch et al's Dr. P. S. Griffith 1 (136-ac), Frank Johnson sur, 3 mi sw Crockett, sd 3250 ft.

HUNT COUNTY—Bauersfeld & Aue, Inc.'s J. M. Goin 1 (250-ac), Jas. Merrick sur, 2 mi sw Wolfe City, elev 606 ft, sd 1010 ft.

LAMAR COUNTY—Blackman & H. W. McGee's J. M. Duff 1 (75-ac), J. C. Lamb sur, near Powderly, sd 170 ft.

LEON COUNTY—J. W. Kelley & Fox's L. W. Bryant 1 (48-ac), A. M. Coulter sur, 1 mi ne Marquez, rig.

LIMESTONE COUNTY—Pure Oil Co.'s Kendrick 16-T (96-ac), 3 mi w Mexia and in field, elev 508 ft, top Woodbine 2896 ft, top Georgetown 3365 ft, top first Glen Rose 4270 ft, top broken anhydrite 5132 ft, Travis Peak series 5656-7676 ft, no oil shows in lower Marine, fsh 700 ft drill pipe 8847 ft. Stanolind O&G Co.-Ramsey Pet. Corp.'s T. Norris 1 (40-ac), K. Thrasher sur, 5 mi n Kosse and on Thornton fault, elev 528 ft, Austin chalk 2791-2890 ft, top Woodbine 2980 ft, top Georgetown 3255 ft, top first Glen Rose 4026 ft, top first anhydrite 4886 ft, top Pettit 5375 ft, coring 5480 ft.

NAVARRO COUNTY — Nowlin, W. W. Lechner & J. S. Hudnall's Easterling 1 (209-ac), J. Mayor sur, 2 mi s Chatfield, dr 915 ft. Mrs. Jane Robinson et al's Fortsan Bros. 1, Eli Smith sur, 5 mi ne Corsicana, elev 345 ft, sd 900 ft. Tom Sharp et al's E. B. McDowell 1 (65-ac), T. J. Jordan sur, ½ mi s Bazette, Pecan chalk 1980-2005 ft, Austin chalk 2835-2935 ft, fsh 2970 ft.

RUSK COUNTY—J. W. Shipman et al's Citizens Nat'l Bank-L. T. Burton 1 (125-ac), J. J. Y'Barbo sur, 4 mi ne Henderson, elev 432 ft, base Georgetown lime 3676 ft, sd 4500 ft.

EAST TEXAS BORDER COUNTIES

HARRISON COUNTY—Eastern Shrevetex Oil Co.'s Mable George 1, J. S. Powell sur, testing so, td 2505 ft. J. B. Bond's Bailey & Martin 1, Geo. Martin sur, installing valve on bull plug to test origin sg, td 6518 ft.

PANOLA COUNTY—Danciger O&R Co.'s J. W. Tatum 1, Alfred Bissell sur, massive anhydrite 4880-5175 ft, re-cemntd 5-3/16 in csg with 75 sacks at 6350 ft, perf csg 6010-26 ft, tested dry, perf 5986-94 ft, tested mud and sg, arr run liner and re-test, td 6514 ft. Magnolia Pet. Co.'s E. A. Hull 2, Thos. Applewhite sur, elev 222 ft, top Travis Peak 6024 ft, top lower Marine 8078 ft, fsh, td 8718 ft. C. K. Crews' J. C. Graves 1, McGowan sur, mim.

SHELBY COUNTY—Allen et al's George 1, C. C. Tutt sur, sd 2950 ft chalk. C. L. Cope's Pickering Lbr. Co. 1, Stephen English sur, rur. Portex Oil Co.'s Pickering Lbr. Co. 3, A. Hanson sur, mim. Redditt & Gray's Pickering Lbr. Co. 2, S. O. Pennington sur, rur.

WYOMING

ALBANY COUNTY—Ohio Oil Co.'s D. J. Griffin 2, c sw se sw 2-21n-77w, dr 663 ft.

CARBON COUNTY—Superior Oil Co.'s Christensen 1, nw nw 7-12n-92w, mim.

FREMONT COUNTY—Stanolind Oil & Gas Co.'s Johnson 1, c se se 3-33n-96w, dr 3470 ft.

NATRONA COUNTY — General Petroleum Corp.'s Government 1, nw nw se 21-35n-77w, dr 2993 ft in Mesa Verde formation.

SWEETWATER COUNTY—Mountain Fuel Supply Company's John W. Hay Jr. 1, sw c ne se nw 2-19n-110w, spd 71 ft. Company's W. L. Williams 1, c e ne 5-12n-95w, dr 5429 ft.

WESTON COUNTY—Mush Creek Oil Co.'s Carmine 1, nw se 31-44n-62w, dr 650 ft. John Brorby's 1, sw ne nw 26-48n-64w, dr 1650 ft.

Pipe Line Repair

Engineers, superintendents and maintenance men responsible for pipe line maintenance will be interested in the new "Pipe Repair Handbook," published by M. B. Skinner Company, South Bend, Ind. It discusses all the various kinds of leaks in pipe lines—holes, splits, pitted or corroded sections; and joints of various kinds, such as threaded joints, bell and spigot joints, welded joints, collars, etc.; and discloses how repairs may be made without service interruption. The handbook is furnished without cost to men responsible for pipe maintenance.

LONE STAR GASOLINE COMPANY

★

Producers and Distributors of Natural Gasoline to Refiners and Blenders

Plants in

OKLAHOMA TEXAS KANSAS

1915 WOOD STREET DALLAS, TEXAS

THE ENGINEERS' SKETCH BOOK—Barber

(Sixth Edition)

If you have studied in Great Britain, you know of it. If you have not studied there you will scarcely believe what follows!

IMAGINE that you are asked to design or find a certain type of gear, valve bearing, automatic cut-off, condensing, cooling or spraying system. Time is limited. Suppose that in twenty minutes you could produce ten or twenty definite, time tested working plans. Suppose you could do the same on many other similar problems. YOUR ASSOCIATES WOULD CONSIDER YOU A WIZARD!

IMAGINE that you have a book listing and picturing all known mechanical movements and designs.

NOW — STOP IMAGINING!

You can make such a miracle come true!

You can have at your fingertips hundreds of good, practical solutions for "tough" problems which arise daily.

You don't have to depend on your memory and you don't have to go through many books. IT'S ALL IN ONE LOW-PRICED BOOK.

Nearly 3,000 illustrations—No theory—No mathematics
—No general matter — Just actual working sketches.

It will bring you prestige and recognition! It will save you time, money and worry!
ORDER YOUR COPY NOW! — Price $4.25, plus 15c for postage.

GULF PUBLISHING COMPANY : 3301 Buffalo Drive : Houston, Texas

"TRIMO
Guarantees the WHOLE Wrench"

This tag—wired to the handle of every genuine "TRIMO-ALLOY" tool—is your assurance that you are buying the strongest, safest pipe wrench ever made—yet "TRIMO-ALLOYS" **cost no more.**

TRIMONT MFG. CO., INC.
ROXBURY (BOSTON), MASS.

LOOK FOR THIS *Written Guarantee* WHEN BUYING PIPE WRENCHES

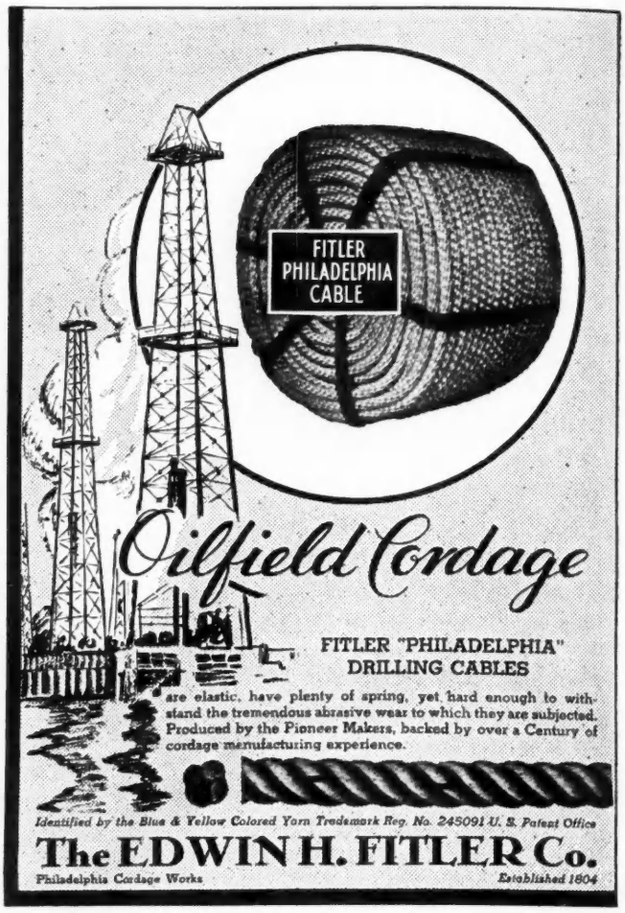
It is your assurance of 100% Heavy Duty Alloy Steel construction—drop forged and heat treated for extra strength—**at no increase in price!**

DROP FORGING PROCESS

The strongest known method of making quality steel tools—and the reason for the "built-in" quality which permits Trimo to guarantee the whole wrench.

"TRIMO

Guarantees the WHOLE *Wrench"*


FITLER
PHILADELPHIA
CABLE
Oilfield Cordage
FITLER "PHILADELPHIA"
DRILLING CABLES
are elastic, have plenty of spring, yet hard enough to withstand the tremendous abrasive wear to which they are subjected. Produced by the Pioneer Makers, backed by over a Century of cordage manufacturing experience.
Identified by the Blue & Yellow Colored Yarn Trademark Reg. No. 245091 U. S. Patent Office
The EDWIN H. FITLER Co.
Philadelphia Cordage Works
Established 1804

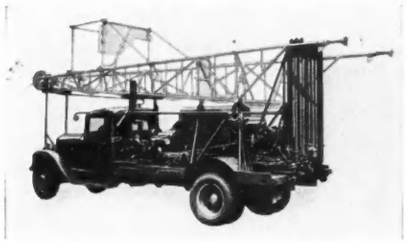
Get There First and Get the Business!

How much is an extra business day worth to you? Figure it up—can you possibly afford NOT to fly these day-saving Braniff B-Liners? Save extra days and hours between Chicago, Kansas City, Wichita, Oklahoma City, Dallas, Ft. Worth, San Antonio, Houston, Brownsville and Mexico. Every modern travel luxury. Hostess service. Delicious meals aloft. For reservations or information, call any air line, hotel, travel or telegraph office.

NEW PRODUCTS FOR THE FIELD
Machinery • Tools • Equipment

MOTORIZED DRILL
Sullivan Machinery Company

Sullivan Machinery Company, Michigan City, Indiana, has announced a new motorized drill which is furnished with 3-speed transmission, power take-off drive for mud



Sullivan Motorized Drill

and oil pumps, separate power unit for driving drill table and draw works, tubular steel electrically-welded mast wired for lights, and with double sheave crown block, working platform, adjustable jack-screw legs, hydraulically actuated lifting cylinders, 5-foot hydraulic feed, hydraulic chuck operated through unit control valve, hydraulic retracting mechanism, built-in 4 x 5 or 4 x 6 new type mud pump and tandem-drive oil pumps in hydraulic system—all mounted on a truck. The approximate weight with truck is 15,000 pounds.

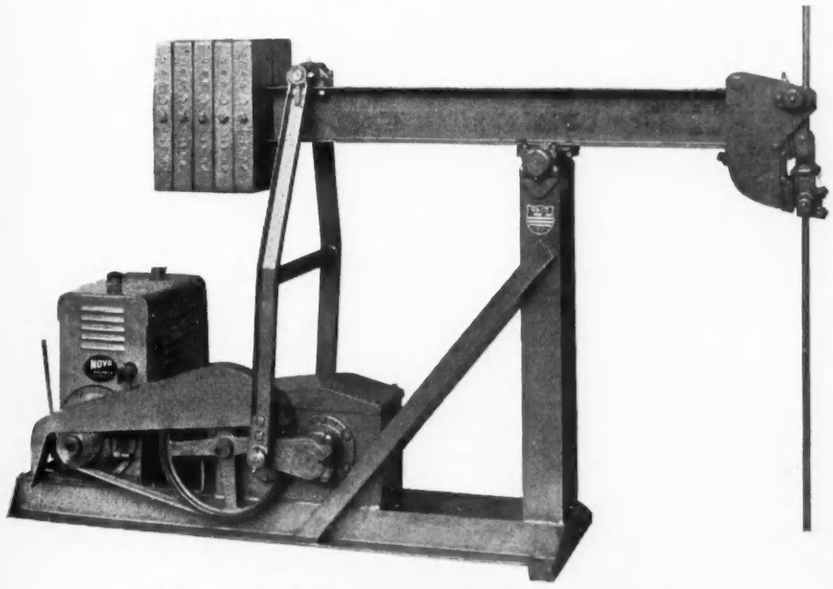
SHALLOW FIELD PUMPING UNIT
The National Supply Company

The National Supply Company of Delaware, Toledo, Ohio, announces a new unit for single-well shallow-field pumping, which is of the self-contained twin-crank design, generally used for heavier pumping duty.

A sufficiently high reduction gear ratio is used to utilize low-cost high-speed prime movers. At the same time further variation in the V-belt drive allows the adaptation of slow- and medium-speed types if desired. The cranks clear the derrick floor so that no special foundations are needed and the unit can therefore be economically installed or moved at any time.

All-welded construction is used throughout and the unit is both compact and rigid. The reduction gear is rated at 3.6 nominal horsepower at 20 r.p.m. with a reduction ratio of 24.9. The gears are alloy, heat-treated, single helical, assuring quietness and efficiency, and run in an oil-tight case. All reduction gear shafts are carried in Timken bearings.

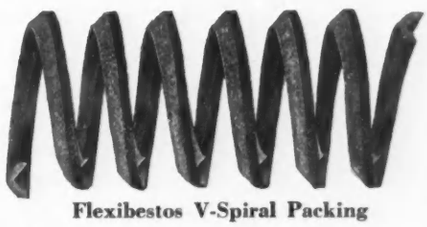
A link type polished-rod hanger that closely approaches straight lift at maximum stroke is regular equipment with arc type wire line hanger optional. Well servicing is made convenient by a removable beam hanger head. Saddle, beam and wrist pin bearings are of the enclosed oil bath, dust- and oil-tight type. Maximum stroke available is 24 inches. Counterweights are of the beam type added in 5 increments to give a maximum counterweight effect, at maximum stroke, of 1753 pounds. The weight of the complete unit less the counterweights is 1310 pounds.



National TU70G-JD7T Single Well Shallow Field Pumping Unit

FLEXIBESTOS V-SPIRAL PACKING
The Texacone Company

The Texacone Company, Dallas, Texas, announces Flexibestos V-spiral packing, a continuous moulded spiral form, of V-ring cross section. The diameter of the spiral may be varied at will within commercial ranges and rings cut off therefrom to fit the particular diameter desired. About 15 kinds of



Flexibestos V-Spiral Packing

packing will be made for each width, each of a semi-universal nature so that many conditions may be handled by each variety.

The design is intended to reduce warehouse stocks by providing universality of application from a few sizes. It is suitable for all rods, plungers and valve stems and for some centrifugal work.

TRACTOR
Marmon-Herrington Company

Marmon-Herrington Company, Indianapolis, Indiana, recently announced the production of a new tractor said to represent outstanding progress in commercial track-laying design, maneuverability, power, speed and economical operation.

These new tractors are capable of road speeds of 25 miles an hour and better, a departure from the performance of track-laying units previously available. From four to five miles per gallon of gasoline is said to be the average consumption.

The new tractor utilizes the B. F. Goodrich new type of track with Marmon-Herrington patented suspension. The track combines the strength of steel and the cushioning effect of rubber to allow smooth, quiet operation free of clatter and vibration. Greater tractive ability is realized and track mileage is said to have been substantially increased.

The special track is a continuous band of rubber, smooth on the inner surface and with adequate traction lugs on the outer surface. It has a core of from 20 to 30 endless, flexible wire steel cables gripped at intervals by the track guide and drive lugs. The drive sprockets impart their power directly to the cables and the rubber is

WILLIAMS
SUPERIOR DROP-FORGED TOOLS

PRESENTS

TWO NEW TONGS

Both Equipped with Alloy "Superchain"

"VULCAN SUPERTONG" A new Williams' "VULCAN" — a "SUPERTONG" in every sense of the word. Same design and structural features as the famous "Vulcan" Tongs which have been oil field favorites for more than 40 years. BUT — the new "SUPERTONG" is forged from Alloy and high-tensile steel, and heat-treated — providing at least *50% greater strength* than regular "Vulcan" Tongs of corresponding size and weight. Finished in gray enamel with blue jaw panel and bright faced jaw edges.

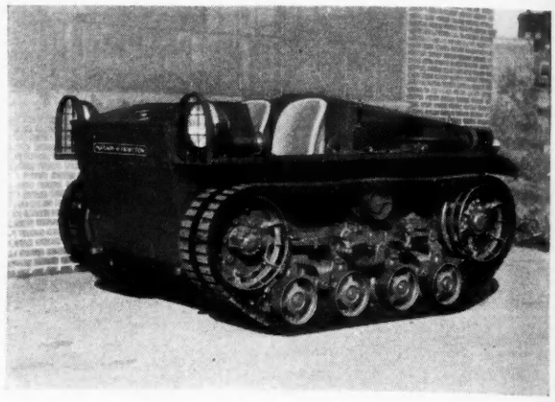
"BOLL-WEEVIL ZEPHYR" Again Williams steps ahead with a light-weight pattern of the popular "Boll-Weevil" Reversible Action Tong. Stronger and lighter, capacity for capacity, the "Zephyr" is ideal for flat pipe work and pipe line work — exceptionally efficient in trenches. Operates by simply laying Tongs on top of pipe and hooking chain around it. To "make up," engage rear end of jaws and push handle down; to "break out," pull tongs back to engage forward teeth and pull up on handle. Reversible action is instantaneous. Handle and Panel in Jaws finished in gray enamel; jaws have bright faced edges and blue backs.

Both Tongs are Equipped with the New "Vulcan Superchain"

Made from Alloy steel, heat-treated and cadmium-plated, "Superchains" have greatly increased strength and durability. Each "SUPERCHAIN" is individually proof-tested and certified.

J. H. WILLIAMS & CO., 75 Spring Street, **NEW YORK**

Headquarters for: Drop-Forged Wrenches (Carbon and Alloy), Detachable Socket Wrenches, "C" Clamps, Lathe Dogs, Tool Holders, Eye Bolts, Hoist Hooks, Thumb Nuts and Screws, Chain Pipe Tongs and Vises, etc.



Marmon-Herrington Tractor with New Type Track

used only as a cushioning medium and not to transmit power.

Combined with the high road speed of the Marmon-Herrington unit is an ease of operation and riding quality. Road shocks are cushioned by an unusual and exclusive Marmon-Herrington spring suspension which is self-dampening and which eliminates rocking, pitching and galloping. Operation has been perfected to make finger-tip control adequate and the rolling resistance of the unit has been reduced to the point where a brake is necessary, the manufacturer states.

The tractor can be pivot turned either from a standing position or from the highest forward speed in perfect safety. Its center of gravity is so low that the unit can be turned on the face of any hill it will climb and while it may slip sideways it does not turn over, it is said. The special welded steel hull is water-tight, allowing operation in more than 36 inches of water.

DUPLEX POWER PUMPS

Fairbanks, Morse & Company

Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, has developed a new line of duplex power pumps for oil field service, fire protection and for general service requiring pressures up to 800 pounds per square inch and capacities to 187 gallons per minute.

Among the features of this new pump are quiet, efficient herringbone gears that insure a smooth flow of power to the fluid end, with a minimum of vibration, generous crankshaft and pinion-shaft roller bearings that reduce mechanical friction to a minimum, and an improved line type fluid end.

In handling heavy or viscous liquids, the speed of the power pump can be reduced to effectively accommodate slow-flowing characteristics. Cylinders are filled on each piston stroke, and the pump performs at its maximum efficiency.

These power pumps are offered with a fluid end piston stroke of 10 inches and with cylinder diameters of 2½ to 5 inches, providing a capacity range of 40 to 187 gallons per minute at pressures from 250 to 800 pounds per square inch. The pumps can be furnished alone, with pulley for belt drive, or with top-mounted F-M motor and silent chain drive.

SHALE SHAKER

The Jeffrey Manufacturing Company

The Jeffrey Manufacturing Company, Columbus, Ohio, has developed the Blue Streak shale shaker, which has been thoroughly tested in actual field service and which has been designed to give efficient recovery of mud at high capacity and uninterrupted service with minimum attention.

This new shaker, measuring 4 x 6 feet, is of rigid unit construction and self-contained, ready to operate when set in place. The amplitude of vibration may be quickly adjusted to suit operating requirements while screen is running (merely by changing tension of springs on feed end). Efficient screening plus positive conveying action assures maximum mud recovery at high capacity rate. Ample supports are provided both lengthwise and crosswise to avoid sagging and whipping of cloth, or back-creeping of material being treated. These supports are protected by rubber to prevent chaffing or cutting of screen cloth. The screen cloth is tautly stretched lengthwise and crosswise.

The vibrating unit is an unbalanced pulley on roller bearings on a stationary shaft which is rigidly attached to the screen frame. These bearings run in an oil bath inside a sealed housing, and therefore, need no attention for a long period.

The pulley shaft is securely mounted through rigid clamps

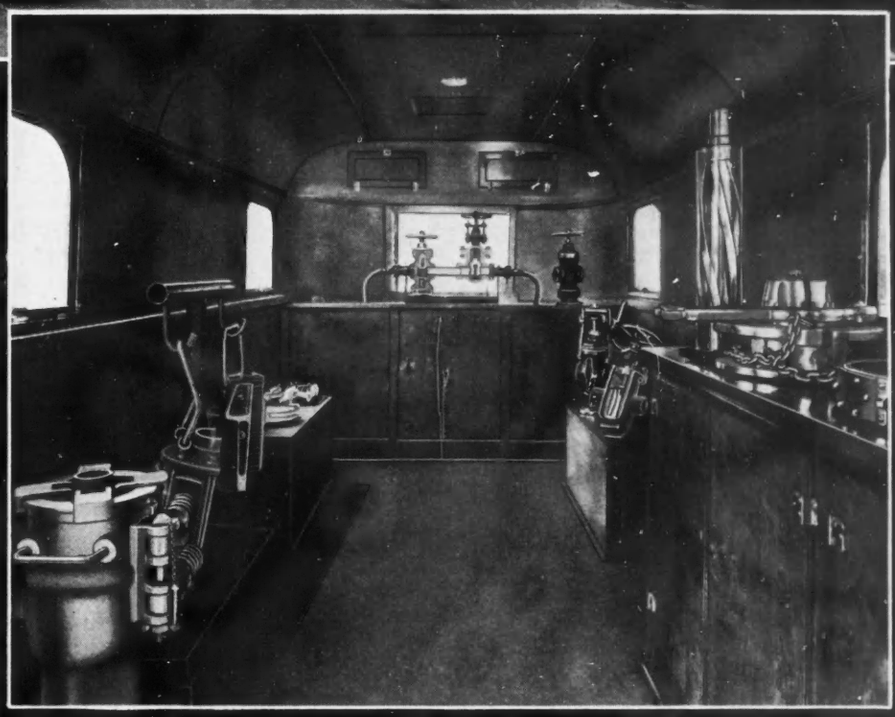
WE'RE BRINGING OUR OIL SHOW TO YOU!

For those men who didn't attend Oil-World Exposition in Houston, and for those who didn't spend as much time in our booths as they'd like . . . we're bringing our own oil show to you!

The W-K-M Equipment Display Coach, a traveling display of W-K-M proven oil country products, is on its way . . . to exhibit for you right on the lease, in front of the office, a first-hand display for your convenience.

This special display is in charge of E. L. MacBlain, in cooperation with the W-K-M representative stationed at the particular district of call.

The W-K-M Equipment Display Coach will be coming to your territory. Watch for it.



Top: This "traveling oil show" was tailor-made to exhibit W-K-M Products, and rolls along as easily as a regular trailer.

Bottom View: Showing W-K-M Products, either working size or models, according to the size. Interesting and instructive moving pictures are shown regularly in this coach.

W-K-M Company, Inc.

OIL FIELD, PIPE-LINE & INDUSTRIAL EQUIPMENT

HOUSTON, Texas, U. S. A.

Export Office: 74 Trinity Place, New York

Cable Address: "WILKOMAC"

Just Move This Post

On your RIDGID No. 65R and Avoid the Bother of Changing Chaser Dies

No more waste of time looking for different size dies when you want to thread 1", 1¼", 1½" or 2" pipe if you have a RIDGID No. 65R. Simply move the setting post to the pipe size you want. One set of dies instead of 4 sets—one-fourth the bother.

You'll like the new-style workholder, too. Twist the gauge ring to pipe size, put on the pipe, tighten one screw—quick and easy.

Thousands have found also that this new No. 65R cuts clean accurate threads in all variations, all kinds of pipe. It's a time, temper and money saver.

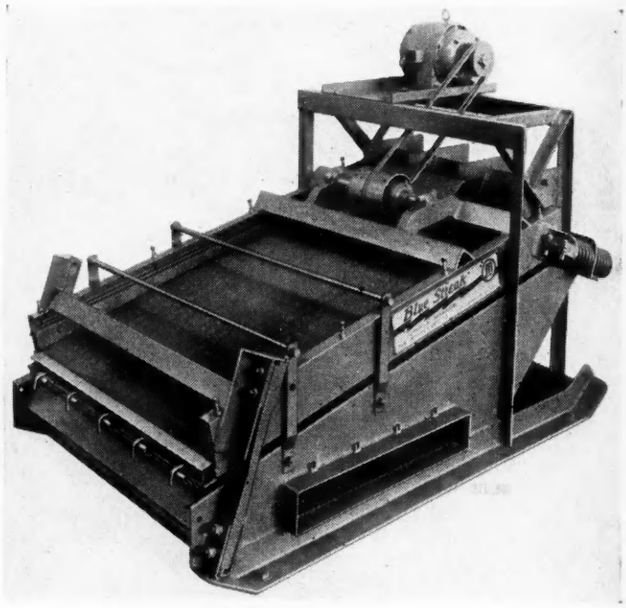
For more profitable work with less effort, get one of these threaders at your Supply House.

The Ridge Tool Co., Elyria, Ohio, U. S. A.

What? No Repairs?

With RIDGID Pipe Wrenches, practically none. Housings guaranteed not to break or warp — stops fully 75% of your wrench troubles.

RIDGID PIPE TOOLS



Jeffrey Shale Shaker.

welded to screen frame. Pulley is driven by two V-belts, on long centers. These belts are readily replaced by loosening clamp bolts.

The feed flow is controlled by three quickly adjusted gates, which distribute mud uniformly across entire width of screen. For washing the cloth, two spray pipes are provided, the positions of which are adjustable.

CUTTING TOOLS

Haynes Stellite Company

The Haynes Stellite Company, Kokomo, Indiana, is offering a new, patented cobalt-chromium-tungsten alloy for metal cutting tools. The new alloy is known as "Haynes Stellite-2400."

Haynes Stellite-2400 cutting tools are marketed in a variety of sizes of solid square and rectangular tool bits, welded tip tools, milling cutter blades, and special small tools to suit requirements. Solid square and rectangular tool bits are ground with a 7 degree front clearance, which is adaptable to a variety of operations. For many other operations, however, the end of the tool can be ground to any desired profile, and the tool is thus rendered suitable for any particular turning, facing or forming job.

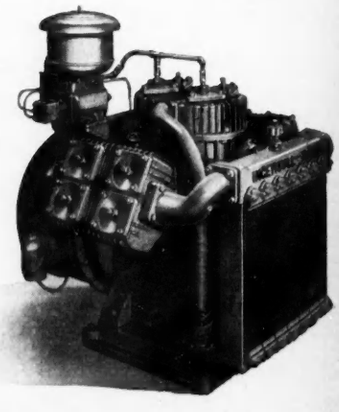
MOTORCOMPRESSOR

Ingersoll-Rand Company

Ingersoll-Rand Company, Phillipsburg, New Jersey, has for distribution its recently developed Motorcompressor, a stationary, vertical, single-acting, two-stage air compressor.

The motorcompressor combines the motor and compressor as a single, compact unit. The compressor crankshaft carries the motor rotor, and the compressor frame carries the motor stator. Flexible-coupling and V-belt drives are also available.

Sizes range from 15 to 75 horsepower for discharge pressures from 80 to 125 pounds per square inch. Piston displacements range from 79 to 445 cubic feet per minute.



Ingersoll-Rand Two-Stage, Air-Cooled Motorcompressor

WHELAND

WHELAND-LUCEY PRODUCTS

- Crown Blocks
- Traveling Blocks
- Swivels
- Rotaries
- Drawworks
- Slush Pumps
- Steam Engines
- Reserve Clutches

DISTRIBUTORS

Lucey Products Corp., Tulsa, Oklahoma.
Houston Oil Field Material Co., Inc., Houston, Texas.
Murray-Brooks Hardware Co., Ltd. Lake Charles, Louisiana.
Frick-Reid Supply Corporation, Tulsa, Oklahoma.

EXPORT

Lucey Export Corporation, 3505 Woolworth Building, New York, N. Y.
Broad Street House, London, E. C. 2, England.

The **A.P.I. STANDARDS**—
"Bible of the Oil Industry" is the guide and Inspiration in designing and building **WHELAND-LUCEY** *Rotary Drilling Equipment*

THE WHELAND COMPANY

ROTARY DRILLING EQUIPMENT

Chattanooga, Tenn.

This Week with the Industry's EQUIPMENT SUPPLIERS

C. B. Hinton Selling for Williamsport at Houston

C. B. Hinton, for the past seven years with the Williamsport Wire Rope Company along the Mississippi River, is back in oil field sales, having been moved to Houston by Bethlehem Steel Company to have charge of the Williamsport Wire Rope and Strand Division of the company. Hinton, a former University of Arkansas football player, is a veteran with Williamsport, having been through the Smackover boom right after the war. He was in Texas several years in oil field sales for the company before being transferred to Memphis and is well known in Mid-Continent circles. He takes the place in Houston formerly held by Raymond Ford who has been moved to Chicago to handle wire rope and strand in that section.

C. B. HINTON
Representing Williamsport Wire Rope at Houston.

Rhodes Metallic Appoints Gulf Coast Representative

J. L. Linkhart, formerly of Tulsa, has been made Gulf Coast representative of Rhodes Metallic Packing Company, making his headquarters in Houston.

Changes in Petroleum Rectifying Company Personnel

T. N. St. Hill, president of Petroleum Rectifying Company of California, anounces several changes in the personnel of the company, which are effective immediately.

H. C. Eddy, chief engineer, who has a record of 24 years of continuous service, has been elected a vice president and director of the company. As vice president he will be in full charge of all engineering activities.

W. K. Mellon, California district manager, with 18 years of continuous service to his credit, also has been elected a vice president, in which capacity he will have charge of sales and service in all territories.

William Woelflin, who has served as research engineer in the company's laboratory at Long Beach, California, for the past 6 years, has been appointed district engineer for California with headquarters at Long Beach.

C. H. M. Roberts, who has been engaged in special research work for the company during the past 14 years, has been appointed research engineer in charge of the laboratory and research department at Long Beach.

Yarbrough Guns Opens Houston and Corpus Christi Branches

Yarbrough Guns Company, Los Angeles, California, has opened offices at 1936 Sidney Street, Houston, and at Corpus Christi, where it will render service at any hour.

The manufacturers claim that the Yarbrough process of gun perforation offers maximum penetration and absolute safety through controlled firing. Each shot is fired independently from the surface by electricity carried through an insulated conductor cable to the gun, which is made from special tool steel to have sufficient strength and resist shocks. A controller house in the gun head governs the ignition of each barrel; a separate electrical impulse of a given duration, voltage and type being required for firing each shot.

Allied Equipment Company Appointed Agent

The Harnischfeger Corporation of Milwaukee announces appointment of Allied Equipment Company, 1639 W. Main Street, Oklahoma City, as agents for the complete line of P&H-Hansen smootharc welders and welding electrodes. Having for many years been dealing in mill, refinery and construction machinery supplies and equipment, this organization has many outlets.

Harnischfeger Names Standard Asbestos Agent

The Harnischfeger Corporation of Milwaukee announces appointment of Standard Asbestos Manufacturing & Insulating Company as agent for P&H-Hansen smootharc welders and welding electrodes. With a general office and factory located in Kansas City, Missouri, this company has in addition complete offices and warehouse facilities in Tulsa and Oklahoma City, Oklahoma, and also in Borger, Texas. Complete stocks and warehousing facilities are maintained at all locations.

In business for the past 36 years, this company has made constant progress during that time with their 1936

Petroleum Rectifying Company Promotes These Old-Timers

H. C. EDDY
Vice President

W. K. MELLON
Vice President

C. H. M. ROBERTS
Research Engineer

WM. WOELFLIN
District Engineer

volume increasing 75 percent over that of 1935 and with the volume for the first six months of 1937 increasing 195 percent over the same period for 1936.

For the past 10 years they have specialized in the industrial supply business with special attention being paid to the oil industry and heavy industrial construction.

Ray F. Riddle Joins Max E. Landry Company

Ray F Riddle, for the past nine years with Westinghouse Electric & Manufacturing Company, has become associated with Max E. Landry Company, sales representatives in Tulsa for Buffalo Gasoline Motor Company, Foote Brothers, Pennsylvania Transformer Company, Pyott Foundry Machine Company, Terry Steam Turbine Company, Ideal Electric & Manufacturing Company, Simplex Corporation and United States Motors Corporation. Riddle, a native of Kaw City, Oklahoma, graduated from Oklahoma Agricultural & Mechanical College in 1925 with a degree in electrical and mechanical engineering.

Practical Petroleum Engineers' Handbook

The Gulf Publishing Company has published "Practical Petroleum Engineers' Handbook," by Joseph Zaba and W. T. Doherty. The handbook presents in one volume a large number of charts, tables, formulae, and other pertinent engineering data that has been

RAY F. RIDDLE
Now with Max E. Landry Company at Tulsa.

of great value in solving current and special problems. The book avoids as much descriptive texts and theory as possible, and is confined to a collection of factual data that is carefully arranged and indexed to make it available at a moment's notice.

The co-authors of the handbook discovered by coincidence that each had been for a period of several years accumulating practical data, which through collaboration appears in the volume.

The book in chapter form touches on general engineering data, steam, power transmission, tubular goods, drilling, production, and transportation. The purposes of the handbook are distinctly practical, and should prove of value to individuals and companies now active in drilling and production departments in the oil industry.

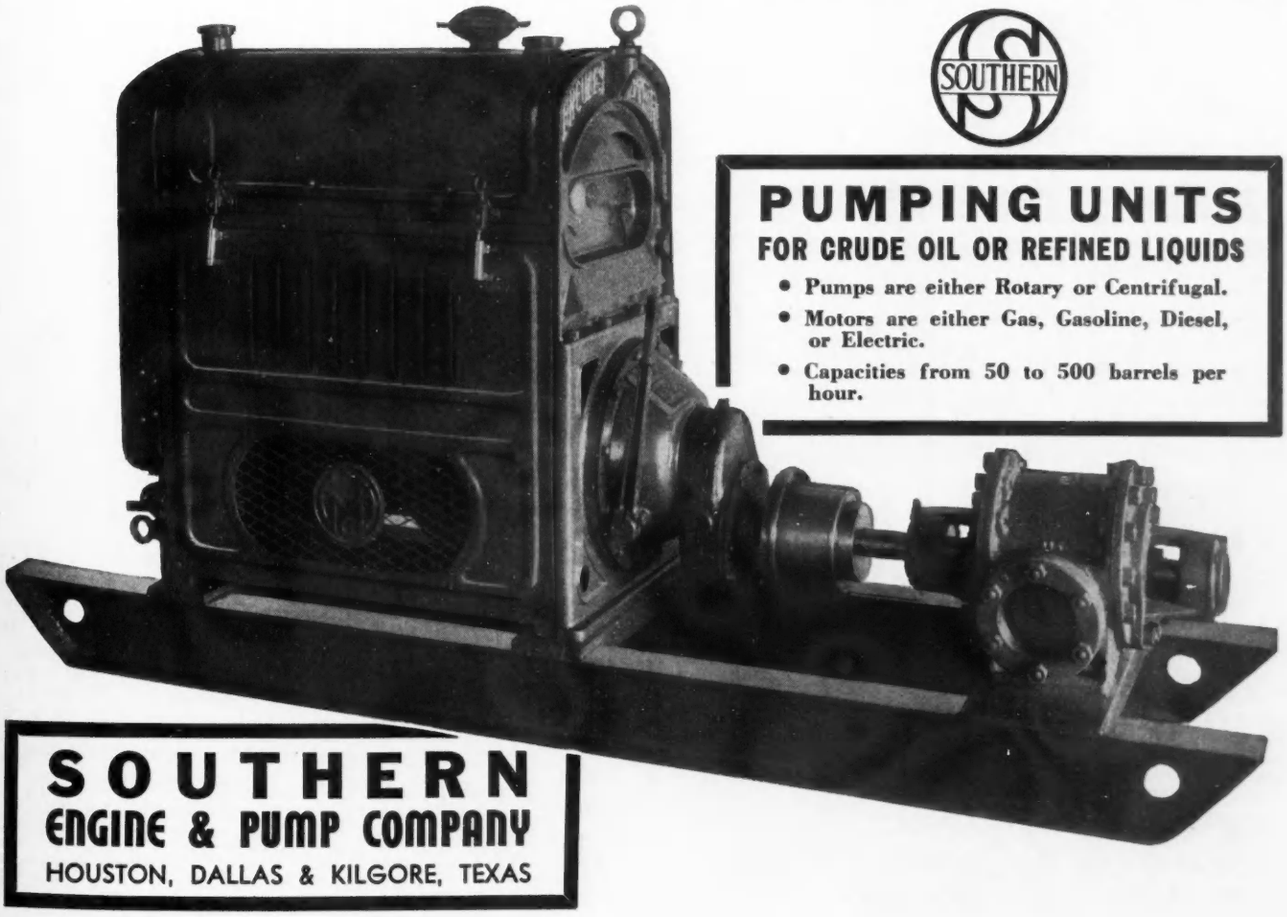
Joseph Zaba is petroleum engineer with Rio Bravo Oil Company, and W. T. Doherty is Division Superintendent, Humble Oil & Refining Company.

The handbook sells for $5.00 per copy, and may be obtained from The Gulf Publishing Company, Houston, Texas.

Educational Film Offered by Bureau of Mines

The United States Bureau of Mines, Washington, D. C., offers a new educational film entitled "The Power Within," showing the construction and operation of internal combustion engines. This two-reel silent motion picture film depicts the historic development, construction and operation of the modern internal combustion engine and operating parts of the automobile.

Copies of this film, in 16- and 35-mm. size, are available to interested parties free of charge, although transportation charges will have to be paid.


SOUTHERN
PUMPING UNITS
FOR CRUDE OIL OR REFINED LIQUIDS
• Pumps are either Rotary or Centrifugal.
• Motors are either Gas, Gasoline, Diesel, or Electric.
• Capacities from 50 to 500 barrels per hour.
SOUTHERN
ENGINE & PUMP COMPANY
HOUSTON, DALLAS & KILGORE, TEXAS

IT'S THE *Cat's Whiskers*

FOR CLEANING OUT!

MILLER SAND PUMP

Because the MILLER—the Sand Pump with the powerful suction action, in world-wide use. Quickly cleans out the sand in your wells, permitting free flowing of the oil.

The MILLER is made in diameters of 2½, 3, 3½, 4, 4¼, 5, 5½, 7 and 9 inches and lengths of 20, 25 and 30 feet. 5/32-inch wall thickness in REGULAR Type, ¼-inch wall tubes HEAVY Type Sand Pumps.

INTERCHANGEABLE BOTTOMS
To Meet Every Condition

- **BAILER BOTTOM**
  With the Bailer Bottom installed the MILLER is quickly changed to a Bailer giving you a combination of either Bailer or a Sand Pump in one tool.
- **SAND BOTTOM**
  Used when tools are run and when well is shot to quickly remove loose material.
- **STAR BOTTOM**
  Used for cutting the sand loose.
- **CHISEL BOTTOM**
  (In Pump)
  With this bottom tightly packed sand can be easily broken in small pieces so it can be picked up in the pump.

Write for Descriptive Folder and Price List

See Page 1186 COMPOSITE CATALOG

PATENTED
NO. 1370340
NO. 1523604
NO. 1787390
NO. 1862628
NO. 1866026
NO. 2085667

MILLER Sand Pump Co.

General Offices and Shop, Box 4516
OKLAHOMA CITY, OKLA., U. S. A.

Branch Shops and Offices:
SAPULPA, OKLA. and KILGORE, TEX.

FOR SALE BY SUPPLY STORES EVERYWHERE

Squeaks from the Bull Wheel

Comforting Sound

"In time of trial, what do you suppose brings most comfort to a man?"

"A verdict of 'Not Guilty,' I should imagine."

Thinking of Her

They apparently had not met for some time. They were sitting in the gloaming, listening to the languorous roll of the sea below.

"And you say you were in the town where I live last week?" she murmured softly.

"Yes!"

"And you thought of me, John?" she cooed.

"Ay, I did," replied John. "I said to myself, 'Why, isn't this where what's-her-name lives?'"

New Pond

"Any luck?" asked the farmer as he came upon a man fishing in a pond.

The angler shook his head.

Later that day the farmer appeared again.

"Any luck?" he asked once more.

"No," muttered the fisherman. "Are there any fish in this pond?"

"Don't rightly know," mused the farmer. "The pond wasn't here yesterday."

That Was All

Stern Parent (to applicant for daughter's hand): "Young man, can you support a family?"

Young Man (meekly): "I only wanted Sarah!"

Ducks and Ducks

A salesman was rattling along a country road in eastern Tennessee, when he came to a ford. A darky was standing by the little stream where some ducks were swimming. The salesman said: "Can I get through the creek with this car all right?" "Yes, suh, drive right through." The salesman, thus encouraged, drove into the stream, only to find that the water was so deep that it flooded his engine. He and his companion had to get out into the stream with the cold water up to their armpits and push the car to the bank. The salesman turned to the negro and said angrily: "What do you mean by telling me that I could drive through that creek?" "Well, boss, I nevuh knew dat water was so deep. It only comes half-way up on my ducks!"

Confusing

"Why is your car painted blue on one side and red on the other?"

"It's a great scheme. You should hear the witnesses contradicting each other."

Bow Wow

Magician (sawing woman in half): "Now after this young lady is severed, her brain will go to science and the rest to the dogs."

Voice (from the baldheaded circle): "Woof, woof."

Fashion Don't

"Poor Sarah; she landed in jail for having her dress on backward."

"Why, they can't put her in jail for that!"

"Ah, yes, but they did; it was her evening dress."

No Compliment

Dramatist: "So you've read my new revue? Well, what do you think of it?"

Manager: "My dear sir, there are two scenes in it that Shakespeare himself couldn't have written."

Dramatist: "Really! Which scenes are those?"

Manager: "That one in the wireless shop and the one in the film studio."

Good Grade

Sammy was not prone to overexertion in the classroom. Therefore, his mother was both surprised and pleased when he came home with the announcement: "I got a hundred this morning."

"That's lovely, dear," she said, as she kissed the boy tenderly. "What was it in?" she asked.

"Fifty in composition and fifty in grammar."

Hm-m

"P'taters is good this morning, madam," said the market gardener, making his usual weekly call.

"Oh, are they?" retorted the customer. "That reminds me. How is it that those you sold me last week were so much smaller at the bottom of the basket than at the top?"

"Well," replied the man, "p'taters is growin' so fast now, by the time I get a basketful dug, the last ones is about twice the size of the first."

Sold

The tailor was selling his best friend a new suit. He was raving about the garment.

"I'm telling you, Harry," he said, "that even your best friend won't recognize you in that suit! Just take a walk outside for a minute and get the feel of the garment."

Harry went out and returned a moment later. The proprietor rushed up to him with a happy smile.

"Good morning, stranger," he beamed, "What can I do for you?"

A Garden Hint

The inquisitive woman was worrying the gardener. She asked a lot of silly questions.

"What steps do you take with the caterpillars?" she asked next.

"Well, mum," said the exasperated gardener, "I takes half a dozen steps into our nearest field and turns the caterpillars round three times so that they gets giddy and don't know their way back."—Montreal Star.

Some Say She Do

Is the 4:10 a good train?

Well, people will talk, of course, ma'am but there's nothing definitely known agin 'er.